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The *Ambrysus*¹ of Mexico (Hemiptera, Naucoridae)

BY

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FAMILY NAUCORIDAE (Fallen) 1814

SUBFAMILY AMBRYSINAE Usinger 1941

GENUS AMBRYBUS Stål 1862

(Logotype *signoreti* Stål)

- Ambrysus* Stål 1862, Stet. Ent. Zeit. 23:459; 1865, Hemip. Afr., 3:174; 1876, Enum. Hemip., 5:141, 143.
- Ambrysus*, Uhler, 1872, Hayden's Surv. Terr., Rept. for 1871:423; 1876, Bull. U.S.G.S. 1:337; 1877, Wheeler's Rept. Chief Eng. for 1877:1331; 1884, in Kings. Nat. Hist., 2:249, 260; 1886, Brook. Ent. Soc.; 1894, Proc. Calif. Acad. Sci., ser. 2, 4:291.
- Ambrysus*, Berg, 1879, Hemip. Argent. enum. spec. nov. desc., 8vo.
- Ambrysus*, Gillette and Baker, 1895, Hemip. Colo. :63.
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- Ambrysus*, Champion, 1900, Biol. Centr.-Amer., Heterop. 2:355-358.
- Ambrysus*, Kirkaldy, 1906, Trans. Amer. Ent. Soc., 32:151.
- Ambrysus*, Kirkaldy and Bueno, 1908, Proc. Ent. Soc. Wash., 10:185.
- Ambrysus*, Snow, 1906, Trans. Kans. Acad. Sci., 20(1):180.
- Ambrysus*, Van Duzee, 1916, Proc. N. Y. Ent. Soc.; 1917, U. C. Ent. Bull. 2:458.
- Ambrysus*, Hungerford, 1919, Univ. Kans., Sci. Bull., 11:198.
- Ambrysus*, Usinger, 1941, Ann. Ent. Soc. Amer. 34(1):11, 15; 1946, Univ. Kans., Sci. Bull., 31(1):185.
- Ambrysus*, La Rivers, 1949, Bull. S. Calif. Acad. Sci., 47(3):103; 1949, Ann. Ent. Soc. Amer., 41(3):371; 1950, Pan-Pac. Ent., 26(1):19.

Because of the superficial, external similarity between many of the species, it is convenient to characterize the genus in some detail, making it possible to eliminate much repetitive material in the individual species descriptions:

1. Dr. Usinger in Univ. of Kansas Science Bull. XXXI, pp. 182-210, 1946, described some new species of *Ambrysus* from the Frances Huntington Snow Collections and this paper is the culmination and with its illustrated key is a companion work to be used with "A Revision of the Genus *Ambrysus* in the United States" by Ira La Rivers in the Univ. of California Publications in Entomology VIII, No. 7, pp. 277-338, 1951, and is based to a considerable extent upon Univ. of Kansas material.—H. B. Hungerford.

2. Department of Biology, University of Nevada, Reno, Nevada.

General appearance: small and rotund to large and ovate—size 6-16 mm. long, 3.5-8.0 mm. wide. Dorsum generally distinctly bicolored, the head and prothorax slightly lighter in color than the remainder, emboliar edges usually lighter than hemelytra, the latter with or without mottling. Venter generally lighter than abdomen, darkening somewhat in anterior half of body, with or without median, anterior mottling.

Head: glistening and impunctate to roughened and strongly punctate, greenish, yellowish, brown or combinations of these colors, varying from smoothly curved between the eyes to distinctly protuberant before eyes. Eyes generally much darker in color than head, brown to black, often drying in pinned specimens to a pearly gray; outer and posterior margins either forming a continuous curvature, or producing an angulation at point of contact. Labrum same color as front of head, or darker; mouthparts generally darkening at tip.

Pronotum: varying from nearly impunctate and glistening to rough and strongly punctate, and in color from greenish through yellow to deep black-brown. Combined length of pronotum and head varying from more than two thirds greatest pronotal width to distinctly less than two thirds such width. A thin, transverse, dark posterior pronotal line prominently present, the remainder of the posterior pronotal border behind the line predominantly whitish in color. Lateral pronotal edges varying from evenly curving caudad to nearly straight; also varying from smooth to serrate. Posterior pronotal angles may be lacking (*i. e.*, well rounded) or sharply prominent. Venter generally darker medially, with yellow pile prominent about centrum and posterior edge.

Scutellum: always strongly shagreened with shallow but dense punctation, each puncture whitish at bottom. Varying in color from unicolorously dark-brown to various mottlings of light brown and yellow, in some cases, predominantly yellow.

Hemelytra: nearly always with some glisten, punctate, each puncture the seat of a white spot, varying in color from unicolorous dark-brown to a well-developed mottled pattern of brown and light, bright yellow, the embolium almost always distinctly and conspicuously lighter than the rest of hemelytra. Hemelytra may strongly or weakly expose the lateral connexival edges, and may or may not attain abdominal tip.

Venter: the prothoracic venter has been discussed above. Remainder of venter is generally distinctly bicolored, the abdomen golden to brown due to the short, golden hydrofuge pelt, and lighter

in color than the velvety-appearing meso- and metathoracic venters, which latter may have rich brown mottling centrally. Connexival segments may exhibit various combinations of spination or nonspination on posterolateral angles; if spined, the first, and often the first and second angles are generally nonspinose.

Legs: Prolegs—coxa elongate, globular, green, yellow or brown, smooth, glistening, darkening at distal tips, flattened to receive heel of femur; trochanter well developed, smooth, green, yellow or brown, with tufts of yellow hairs on anterior edge; femur smooth, glistening, green, yellow or brown, widest near proximal end, narrowing rapidly to distal end, *i. e.*, typically incrassate, and with characteristic short, very dense mat of hairs along front border which serves as a resting groove for the tibia when closed against femur; tibia very long, slender, smooth, yellow to brown, occasionally greenish, curved most strongly in distal part where, with the single tarsal segment, it forms a continuous, curved, grasping instrument—combined tibia-tarsus-claw, when closed, either slightly exceeding or slightly shorter than, adjacent edge of femur.

Mesolegs—coxa long, greenish, yellow or brownish, somewhat angularly globular, beset with short, dense golden pile, slightly curved from posterior end and weakly laterad, to anterior end, the outer face flat for reception of basal part of femur; trochanter large, similar in color to coxa, smooth distally, pilose proximally; femur very long, narrow, smooth, similar in color to coxa, glistening, compressed dorsoventrally, some golden pilosity on outer length; tibia greenish, yellow or light-brown, smooth, glistening, narrow, strongly armed with longitudinal rows of strong, reddish-brown spines, arranged in series along the four rounded “angles” formed by the slight dorsoventral compression of tibia—distal end ventrally with from one and one-half to a maximum of eight complete or partial transverse rows of spines set across tibial width, the last row at extreme distal tip; tarsus slender, smooth, glistening, green to yellow, pilose beneath, three-segmented, the first segment minute and difficult to see, even in ventral view, terminating in two claws of about same color as tarsus, darkening at tips, generally only weakly or moderately curved.

Metalegs—coxa swollen, globular, green, yellow or light brown, well haired with short, dense golden pile, flattened ventrolaterally for reception of basal part of femur; trochanter well developed, similar in color to coxa, pilose proximally, smooth and glistening distally; femur long, narrow, smooth, glistening, green, yellow or brown, dorsoventrally compressed, weakly spinulose along outer

margin, and bearing a thin mat of short, yellow pile on inner margin; tibia long, narrow, glistening, yellow or green, thickly beset with brownish-red spines as in mesotibia, but spines longer, more prominent, and more evidently unequal in size, long and short spines alternating, arranged along four "corners" formed by the slight dorsoventral flattening—distal end ventrally with from one and one-half to a maximum of eight partial or complete transverse rows of spines set across width of tibia, the last row at extreme tibial apex—inner margin cushioned with a solid, dense mat of long, silky golden swimming hairs; tarsus slim, smooth, long, narrow, green to yellow and brown, three segmented, the first segmented difficult to see, spinulose and pilose beneath, with two claws markedly darkening at tips and weakly to moderately curved.

KEY TO THE MEXICAN SPECIES OF AMBRYSUS

1.	Prosternum fused to propleura, both on the same plane	2°
—	Prosternum free from propleura, most definitely so medially, where prosternum disappears posteriorly beneath fore edge of propleura	3
2(1).	Male genital process short, somewhat platelike, roundly capitate, distinctly less than twice as long as wide; female subgenital plate-apex widely concave, the concavity armed with two small teeth or projections near middle. (Pl. 93, fig. 1)	<i>pygmaeus</i>
—	Male genital process moderately long, parallel-sided to slightly narrowing towards tip, distinctly more than twice as long as wide; female subgenital plate not so constructed. (Pl. 93, fig. 2)	<i>circumcinctus caliginosus</i>
3(1).	Female with two elevated almost peglike angles arising from caudal edge of sternite V at lateral anterior edges of subgenital plate; connexiva spineless; prosternal ridge subequal in length to union of propleura along median line; female subgenital plate tipped with a low, blunt angle; male genital process short, foot-shaped, strongly turned externally. (Pl. 93, figs. 3 and 4)	<i>melanopterus</i>
—	Female lacking the two elevated angles on caudal edge of sternite V; species without the remaining combination of characters	4
4(3).	Lateral edges of abdominal segments III-IV strongly and distinctly serrate in contrast to smooth edges of segments I-II; small, rotund species (species generally with some development of the laterocaudal angle on the female Vth sternite, from a thin, sharp spine to a broad, low but definite sinuosity)	5
—	Lateral edges of all abdominal segments smooth or, if serrate, the serration is gradually developed anteriorly to posteriorly	10

° Numbers refer to figures, pls. XCHH and XCIV.

- 5(4). Males completely lacking a genital process or any indication of such a process, the point usually occupied by it on caudal edge of tergite V being smoothly rounded..... 6
- Males always with some indication of the genital process, from a definite angle or short, stubby process to a fully developed hook 8
- 6(5). Female subgenital plate quadrisinuate at apex, the lateral shoulder-sinuosities low, the central sinuosities prominent, appearing as a medially cleft process; female V sternite bispinate at left posterolateral edge, the usual connexival spine accompanied by an angulate projection arising inward from the laterocaudal margin of the sternite (=laterocaudal spine or angle). (Pl. 93, fig. 5)..... *parviceps*
- Female subgenital plate simply and strongly concave at apex; Vth female sternite unispinate at left posterolateral edge due to loss of outer, true connexival spine, its place occupied by only a smooth curve..... (*pudivus*) 7
- 7(6). Depth of concavity at apex of female subgenital plate less than 50% of width of concavity; smaller, measuring 7.0-7.5 mm. in length. (Pl. 93, fig. 6)..... *pudivus pudivus*
- Depth of concavity at apex of female subgenital plate more than 50% of width of concavity; larger, measuring 7.5-9.0 mm. in length. (Pl. 93, fig. 7)..... *pudivus barberi*
- 8(5). Posterolateral connexival spine of female abdominal segment V absent, laterocaudal process spinelike, very prominent; female subgenital plate quadriangulate at apex, the lateral shoulders subdued, the central angles prominent (*i. e.*, extending more caudad). (Pl. 93, fig. 8)..... *abortus*
- Posterolateral connexival spine of female abdominal segment V present, laterocaudal process subdued, either a low, blunt angle or a rounded sinuosity; female subgenital plate smoothly and weakly concave at apex in *A. hungerfordi hungerfordi*, most angulate in *A. h. angularis*, (*hungerfordi*) 9
- 9(8). Female subgenital plate smoothly and evenly rounded at apex, tip concave; laterocaudal angle low, rounded, much closer to posterolateral spine than to base of subgenital plate. (Pl. 93, figs. 9 and 10)..... *hungerfordi hungerfordi*
- Female subgenital plate slightly more angulate at apex, the sinuosities on each side of the median terminal concavity being flat-topped; laterocaudal angle low but rather sharp, about midway between connexival spine and base of subgenital plate. (Pl. 93, figs. 11 and 12).... *hungerfordi triumpho*
- Female subgenital plate with terminal outline more quadrisinuate, nearly angulate, but rather than sinuosities on each side of median terminal concavity being flat-topped or rounded, they are blunt-angulate; laterocaudal angle absent, unmarked by even a sinuosity along the border. (Pl. 93, figs. 13 and 14)..... *hungerfordi angularis*

- 10(4). Posterior slope behind median prosternal ridge with two tuberculations on each side of median line directly behind caudal end of median ridge, producing a longitudinal median trough- or indentation-effect; female possessing a strong, broad and rather blunt laterocaudal angle; male genital process large and strongly boot-shaped, the sole of the boot straight; tip of female subgenital plate broadly, weakly and simply concave; large species. (Pl. 93, figs. 15 and 16),
puncticollis
- Posterior slope behind median prosternal ridge flat; at most, with a few weak transverse rugosities which never produce a median longitudinal furrow; females lacking the laterocaudal angle; species without the remaining combination of characters 11
- 11(10). Combined length of pronotum and head more than two-thirds greatest pronotal width; head and pronotum highly polished, smooth and glistening, without evidences of punctation. (Pl. 93, fig. 17) *pulchellus*
- Combined length of pronotum and head less than two thirds greatest pronotal width; head and pronotum always with some discernible punctation, even though shiny 12
- 12(11). Female subgenital plate the most distinctive in the genus for this area, semitubular in shape, narrowing sharply from base to apex, and protruding caudad of abdominal tip; valvulae, when projecting beyond subgenital tip, seen to be a rather sharp, smooth, double-pointed ovipositor. (Pl. 93, fig. 18) *vanduzeei*
- Female subgenital plate not so constructed and never projecting beyond abdominal tip; valvulae, when projecting, are hirsute 13
- 13(12). Female subgenital plate dominantly concave at apex, *i. e.*, regardless of degree of development of lateral terminal angles, whether rounded or spinose, a well-marked concavity occupies the apex and is at least half as wide as the subgenital plate at that point 14
- Female subgenital plate variously shaped, multisinuate at apex, but never with a dominant concavity 15
- 14(13). Female subgenital plate simply and broadly concave at apex, lateral angles simple and sharp, but not spinose; male genital process broadened and somewhat spatulate. (Pl. 93, fig. 19) *buenoii*
- Female subgenital plate complexly and broadly concave at apex, lateral angles set inward from edge and prolonged caudad into strong, narrow, but not particularly sharp, spines; male genital process narrow, nonspatulate. (Pl. 93, fig. 20) *mormon australis*
- 15(13). Lateral angles of female subgenital plate-apex rounded, generally shorter (*i. e.*, more cephalad in position) than median angles or sinuosities 16

- Lateral angles of female subgenital plate-apex pointed, angulate or spinose, shorter or longer than median angles or sinuosities 24
- 16(15). Apex of female subgenital plate asymmetrical, from ventral view, with right side extending farther caudad than left side, all angles rounded, the apex trisinate (male genital process short and moderately broad). (Pl. 94, fig. 21) *scalenus*
- Apex of female subgenital plate symmetrical, one side of plate not longer than the other side 17
- 17(16). Male genital process short, narrow, moderately curved; female subgenital plate weakly quadrisinate at apex, the lateral angles low (*i. e.*, more cephalad in position), the median angles extending more caudad and appearing almost as a single bluntly rounded tip. (Pl. 94, fig. 22) *convexus*
- Without the above combination of characters 18
- 18(17). Embolia remarkably inflated, almost angularly so—width of embolia $43 \pm 1\%$ of emboliar length (male genital process very short and broad, female subgenital plate with lateral apical angles low, median angles projecting more caudad, not prominent). (Pl. 94, figs. 23, 24) *inflatus*
- Embolia never so inflated (species without remaining combination of characters) 19
- 19(18). Male genital process short but very broad at apex, decidedly boot-shaped, with a well-developed toe; female subgenital plate-apex with lateral angles lower than median angles; large, comparatively narrow species with a proportionately large head, noticeable, however, only during direct comparisons between species. (Pl. 94, fig. 25) *magniceps*
- Without the above combination of characters 20
- 20(19). Lateral and median angles of female subgenital plate-apex on the same plane, *i. e.*, a line drawn through their four tips being approximately a straight line 21
- Lateral angles of female subgenital plate-apex shorter than median angles or sinuosities, *i. e.*, the median angles project more caudad than the laterals 22
- 21(20). Male genital process weakly curved, proportionately broad, width of process averaging 48% of process-length (using greatest width in apical half of process, and curving length of process from tip to base along inner margin). (Pl. 94, fig. 26) *portheo*
- Male genital process moderately curved, proportionately slender, width of process averaging 28% of process-length. (Pl. 94, fig. 27) *signoreti*
- 22(20). Male genital process simply and weakly capitate, the inner terminal corner but slightly more prominent than outer terminal corner. (Pl. 94, fig. 28) *hydor*
- Male genital process noncapitate, inner terminal corner rounded or angulate, in the former case, strongly produced over outer terminal angle (*lunatus*) 23

- 23(22). Male genital process rather goosehead or doghead-shaped, the inner terminal corner bluntly prolonged; female subgenital plate-apex with median angles only moderately produced caudad of lateral angles. (Pl. 94, fig. 29), *lunatus lunatus*
 ——— Male genital process parallel-sided to apex, where the inner terminal corner is sharply angulate, no wider at apex than over stem; female subgenital plate-apex with median angles rather markedly produced caudad of lateral angles. (Pl. 94, fig. 30) *lunatus menoides*
- 24(15). Female subgenital plate asymmetrical on left side, where a prominent flap occupies the border beyond (laterad of) the left lateral angle; right border scarcely produced. (Pl. 94, fig. 31) *dilatatus*
 ——— Female subgenital plate not markedly or noticeably asymmetrical from one lateral border to the other 25
- 25(24). Lateral apical angles of female subgenital plate long and sharp, spinosely produced, extending considerably caudad of low, rounded, median angles; male genital process large, long, and slimly goosehead-shaped, the inner terminal corner strongly produced, the narrowly rounded end nearly overlapping adjacent edge of the process-bearing sternite. (Pl. 94, fig. 32) *cosmius*
 ——— Lateral apical angles of female subgenital plate shorter than, or even with, the median angles; species without such a male genital process 26
- 26(25). Lateral apical angles of female subgenital plate lower than median angles or sinuosities (*i. e.*, more cephalad in position than the medians). (Pl. 94, fig. 33) *guttatipennis*
 ——— Lateral apical angles of female subgenital plate approximately even with the median sinuosities 27
- 27(26). Lateral apical angles of female subgenital plate long, comparatively narrow, sharp and spinosely produced, even with median, low-rounded angles or sinuosities; median angles set close together; male genital process progressively narrowing to tip, inner terminal corner enormously produced into a straight-edged long process, somewhat like a greatly exaggerated, thin foot. (Pl. 94, fig. 34) *fuscus*
 ——— Lateral apical angles of female subgenital plate short, blunt, often hardly angulate, even with median, low-rounded angles (*i. e.*, level with the medians); median angles wide-spaced, as close, or closer to, lateral angles (as, than) to each other; male genital process not so shaped 28
- 28(27). Male genital process weakly curved, proportionately broad, width of process averaging 48% of length of process (using greatest width in apical half of process, and curving length of process from tip to base along inner margin) *portheo*
 ——— Male genital process moderately curved, proportionately more slender, width of process averaging 28% of process-length *signoreti*

PLATE XCIII



1 PYGMAEUS



2 CALIGINOSUS



3 MELANOPTERUS



4 MELANOPTERUS



5 PARVICEPS



6 PUDICUS



7 BARBERI



8 ABORTUS



9 HUNGERFORDI



10 HUNGERFORDI



11 TRIUNFO



12 TRIUNFO



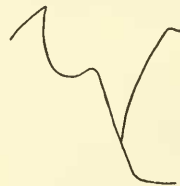
13 ANGULARIS



14 ANGULARIS



15 PUNCTICOLLIS



16 PUNCTICOLLIS



17 PULCHELLUS



18 VANDUZEEI



19 BUENOI



20 AUSTRALIS

MEXICAN AMBRYUS

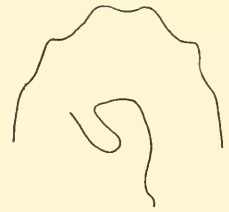
PLATE XCIV



21 SCALENUS



22 CONVEXUS



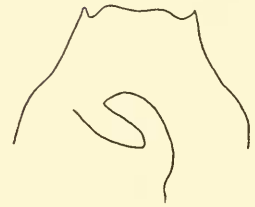
23 INFLATUS



24 INFLATUS



25 MAGNICEPS



26 PORTHEO



27 SIGNORETI



28 HYDOR



29 LUNATUS



30 MENOIDES



31 DILATUS



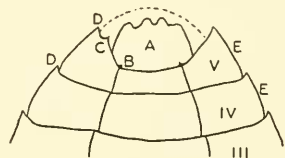
32 COSMIUS



33



34 FUSCUS



35 PARVICEPS

MEXICAN AMBRYUS

DESCRIPTIONS OF SPECIES

Ambryus pygmaeus sp. nov.

General appearance: small for the genus, slim, streamlined—size 7.0-7.5 mm. long, 3.75-4.0 mm. wide. Dorsum unicolorously deep brownish; entire surface densely, shallowly, roughly and coarsely punctate, shiny. Venter unicolorous, slightly darker anteriorly.

Head: densely and coarsely punctate, strongly but smoothly protuberant between eyes. Eyes blackish, bulging markedly above head surface, the most prominent in this respect of the entire genus, resulting in a "popeyed" appearance. Head ratios are:

- (1) total length to width (including eyes), 57::79 (72%)
- (2) anterior distance between eyes to posterior distance, 37::52 (71%)
- (3) anterior distance between eyes to inner eye length, 37::30 (77%)
- (4) posterior distance between eyes to greatest length of head posterior to this line, 52::22 (42%).

Pronotum: roughly, coarsely punctulate, a slight transverse rugosity evident in anterior central part just posterior to greatest penetration of head into pronotum; lateral edges microscopically serrate, moderately curved from front to hind angles—percent of curvature, expressed in terms of straight-line distance between anterior and posterior lateral angles and greatest vertical distance between this baseline and line of curvature, is 12-13% (av. 80::10). Dorsal pronotal ratios are:

- (1) width between anterior angles to width between posterior angles, or, in this case, widest part of pronotum, which, unlike most members of the genus, is not synonymous with posterolateral angles, but is slightly anterior to them, is 81::143 (57%)
- (2) median length to greatest width, 46::143 (32%)
- (3) distance between anterior and posterior angles on same side to perpendicular distance between anterior angle and baseline of pronotum, 67::75 (89%).

Scutellum: unicolorous reddish-brown, rough-punctate. In normal position, *i. e.*, approximately on a plane surface with remainder of body, ratio of three sides, anterior and two laterals, is 96::68::68.

Hemelytra: uniform, deep, reddish-brown, densely punctate. Embolium long, narrow (length to width 81::20 = 25%), peculiarly shaped in that the anterior end is nearly as wide as the posterior end, whereas in all other *Ambrysi* known to me, the anterior end is characteristically and conspicuously narrower than the posterior. Hemelytra rather strongly exposing lateral connexiva, and not quite attaining abdominal tip.

Venter: deep reddish-brown. Connexival segments nonspinose, edges black, nonserrate, curvature weak but present.

Legs: Prolegs—brownish to yellow; ratio of length to greatest width of ventral surface of femur 75::51 (68%): combined tibio-tarsus, when closed, slightly exceeding adjacent (proximal) end of femur, but not conspicuously so.

Mesolegs—yellow to brown; femur stout for the genus, ratio of length to median width of ventral surface 71::14 (20%)—1.80 mm. long; tibia comparatively stout for the genus—distal end ventrally with two prominent transverse rows of spines set in solid rows across tibial apex, the last row at extreme tip—ratio of length to median width 91::12 (13%)—length 1.60 mm.

Metalegs—yellow to brown; femur stout for the genus, ratio of length to median width of ventral surface 86::15 (17%)—length 2.0 mm. Tibia stout for the genus, distal end ventrally with two prominent transverse rows of spines set in solid rows across tibial width, the last row at extreme tibial apex—ratio of length to median width of ventral surface 86::7.5 (9%)—length 1.5 mm.

Distribution: see types.

Type locality data: MEXICO—México (Temascaltepec), 5(vi)33, H. E. Hinton—R. L. Usinger.

Location of types: holotypic male and allotype in the collections of the California Academy of Sciences, San Francisco; four paratypes in the Snow Museum, University of Kansas, Lawrence; six paratypes in the collection of Robert L. Usinger, Berkeley, California; two paratypes in the collection of the writer, Reno, Nevada.

This small species is perhaps the most distinctive member of the *oblongulus* group of *Ambrysus* and a more exact knowledge of its position in the group waits on further collecting, particularly in southern Mexico, south to Costa Rica.

Ambrysus circumcinctus caliginosus Usinger

Ambrysus caliginosus Usinger 1946, Univ. Kans., Sci. Bull. 31(1):190.

General appearance: moderately small, slim, streamlined—size 9.0-9.5 mm. long, 5.0-5.25 mm. wide. Dorsum weakly bicolored, lighter anteriorly; entire surface coarsely punctate. Venter uniformly deep reddish-brown, with some vaguely lighter areas anteriorly.

Head: yellowish-brown, coarsely punctate, distinctly but smoothly protuberant before eyes. Eyes rather prominently protuberant above head surface. Head widely and deeply set into anterior pronotal border. Head ratios are:

(1) total length to width, 60::85 (88%)

(2) anterior distance between eyes to posterior distance, 39::57 (68%)

- (3) anterior distance between eyes to inner eye margin, 39::31 (74%)
- (4) posterior distance between eyes to greatest length of head posterior to this line 57::23 (40%).

Pronotum: brownish, coarsely punctate, extreme edge blackish; lateral edges distinctly, minutely and closely serrate, moderately curved—percent of curvature 12-13% (av. 95::12). Dorsal pronotal ratios are:

- (1) width between anterior angles to greatest width of pronotum (see *A. pygmaeus* for qualifications applicable here), 44::89 (49%)
- (2) median length to greatest width 31::89 (35%)
- (3) distance between anterior angles and point of widest spread of pronotum on the same side to perpendicular distance between anterior angle and baseline of pronotum 41::48 (85%).

Scutellum: deep, uniform reddish-brown, minutely punctulate; ratio of three sides 123::88::88.

Hemelytra: uniform punctate; blackish in color with seven distinct lighter areas as follows: (a) two at bases of elytra; (b) embolia; (c) one medially just behind scutellum; (d) two in posterior third of hemelytra. Embolium long, narrow (length-to-width 118::27 = 23%), shaped somewhat as in *A. pygmaeus* but anterior third not as wide, proportionately. Hemelytra strongly exposing connexiva, and just barely attaining abdominal tip to falling just short of tip.

Venter: deep reddish-brown. Connexiva spineless, characterized by a slight but definite increase in lateral projection of postero-lateral angles from anterior to posterior. Connexiva distinctly but minutely serrate, particularly on posterior segments.

Legs: Prolegs—yellow-brown; ratio of length to greatest width of ventral femoral surface 92::54 (58%); combined tibiotarsus, when closed, slightly, but definitely, overlapping adjacent (proximal) end of femur.

Mesolegs—yellow-brown; femur somewhat stout for the genus, ratio of length to median width of ventral surface 95::12 (13%)—length 2.40 mm.; tibia somewhat stout, distal end ventrally with two prominent transverse rows of spines set in solid rows across width of tibia, the last row at extreme tip—ratio of length to median width 78::8 (10%)—length 2.10 mm.

Metalegs—yellow-brown; femur comparatively stout, ratio of length to median width 110::18 (16%)—length 2.85 mm. Tibia somewhat stout, distal end ventrally with two prominent transverse rows of spines set solidly across tibial apex, the last row at extreme tibial end—ratio of length to median width of ventral surface 116::9 (8%)—length 3.0 mm.

Recorded distribution: central Mexico (Usinger 1946).

Type locality data: MEXICO—"México (Tejupilco), June 18-21, 1933, H. E. Hinton and R. L. Usinger" (Usinger 1946).

Location of types: "Holotype, male, and allotype, female (California Academy of Sciences)," (Usinger 1946), San Francisco.

Specimens examined: the types and several paratypes from the type locality, the latter in the Usinger collection, Berkeley, California.

I am unable to separate *caliginosus* from *circumcinctus* on purely structural characters, and although they seem relatively distinct when examined side by side, the basis for such distinction, size and color, is not reliable in *Ambrysus*; the smaller specimens of *caliginosus* grade into the larger specimens of *circumcinctus* in both respects, and the male and female accessory genitalia, so valuable in species delineation throughout the remainder of the genus, are not even subspecifically distinct. At the present, we can only regard *caliginosus* as the southern unit of *circumcinctus*, which latter was originally described by Montandon from a population centering on Kerrville, Texas, not far from the Mexican border (1910). In all probability, *A. circumcinctus circumcinctus* occurs in northern Mexico as well, but is so far unreported. *A. c. circumcinctus* averages smaller and lighter than *A. c. caliginosus*, a fact which does not disturb any of our theories concerning the changes undergone by a homogeneous population as it proceeds from the tropics into colder regions to the north.

Ambrysus melanopterus Stål

Ambrysus melanopterus Stål 1862, Stet. Ent. Zeit. 23:459; 1876, Enum. Hemipt. 5:143.

Ambrysus melanopterus, Uhler, 1876, Bull. U.S.G.S. 1:337.

Ambrysus melanopterus, Montandon, 1897, Verh. zool.-bot. Ges. Wien, 57:12, 19; 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):316.

Ambrysus melanopterus, Champion, 1900, Biol. Centr.-Amer., Heter. 2:357.

Ambrysus melanopterus, Snow, 1906, Trans. Kans. Acad. Sci. 20(1):180.

Ambrysus melanopterus, Kirkaldy and Bueno, 1908, Proc. Ent. Soc. Wash. 10:186.

Ambrysus melanopterus, Van Duzee, 1917, Univ. Calif. Publ. Ent. 2:458.

Ambrysus melanopterus, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:201.

Ambrysus melanopterus, La Rivers, 1949, Bull. S. Calif. Acad. Sci. 47(3):108; 1951; Univ. Calif. Publ. Ent. 8(7):295-297.

General appearance: slightly more than medium-sized for the genus, moderately slim, and streamlined—size 10-12 mm. long, 5.5-6.5 mm. wide. Dorsum strongly mottled anteriorly, unicolorous brownish posteriorly, entire surface minutely rugose-punctulate. Venter lighter posteriorly.

Head: weakly punctate, longitudinally streaked with alternate

black-brown and yellowish stripes, smoothly but distinctly protuberant between eyes. Eyes very slightly protuberant above head surface, outer and posterior margins meeting at posterolateral corner of eye in a blunt, but definite, angle, and not blending uniformly, smoothly and evenly into one continuous curvature as in the preceding species; basal or posterior eye margin conspicuously rimmed with a chitinous bar or raised edge which projects slightly laterad as posterolateral eye angle to form a weak but discernible angle, in marked contrast to other members of the genus in this area. Head ratios are:

- (1) total length to width 68::115 (59%)
- (2) anterior distance between eyes to posterior distance 42::62 (68%)
- (3) anterior distance between eyes to inner eye length 42::42
- (4) posterior distance between eyes to greatest length of head posterior to this line 62::22 (38%).

Pronotum: shallowly punctate laterally, weakly but distinctly transversely rugulose behind deepest head penetration; lateral edges narrowly pale-yellow, inwardly bordered by a wider area of rich deep brown or black, this bordered in turn inwardly by a pale area well supplied with small, conspicuous, uniform, brownish-black spots which may coalesce at one or two places to form short streaks—the centrum is characterized by a “V”-shaped yellowish area occupied centrally by a dark-brown spot; edges smooth, non-serrate, moderately curved—percent of curvatures 10-12% (av. 128::14); posterolateral angles distinct but rounded. Dorsal pronotal ratios are:

- (1) width between anterior angles to width between posterior angles 56::115 (49%)
- (2) median length to greatest width 44::15 (38%)
- (3) distance between anterior and posterior angles on same side to perpendicular distance between anterior angle and baseline of pronotum, 64::60 (94%).

Scutellum: black, minutely punctulate, ratio of three sides 82::61::62.

Hemelytra: deep brown to black, minutely punctulate; embolium long, narrow (length-to-width 138::30 = 22%), markedly longitudinally bicolored, outer third light. Hemelytra moderately exposing connexiva, and not quite, to just, attaining abdominal tip.

Venter: bicolored, abdomen appearing lighter than remainder. Connexiva spineless at posterolateral angles, edges smooth, non-serrate; curvature discernible but weak.

Legs: Prolegs—yellow to brown; ratio of length to greatest width of ventral surface of femur 120::72 (62%); combined tibiotarsus,

when closed, quite markedly overlapping adjacent (proximal) end of femur.

Mesolegs—yellow to brown; femur long, narrow, ratio of length to median width of ventral surface 113::18 (16%)—length 3.0 mm.; tibia narrow, distal end ventrally with two prominent, transverse rows of spines set in solid rows across width of tibia, the last row at extreme tip—ratio of length to median width 99::8 (9%)—length 2.5 mm.

Metalegs—yellow to brown; femur narrow, ratio of length to median width of ventral surface 132::20 (15%)—length 3.1 mm.; tibia narrow, distal end ventrally with two prominent transverse rows of spines set solidly across tibial width, the last row at extreme tip—ratio of length to median width of ventral surface, 150::10 (7%)—length 3.7 mm.

Recorded distribution: southern Mexico to southwestern United States.

Type locality data: "Mexico."

Location of type: Royal Stockholm Museum, Sweden.

Specimens examined: GUATEMALA: — *Panzos*, (iv)20, Jordan (USNM). MEXICO:—Chiapas (*Mt. Obando*) (quiet pool of small, swift stream), 15 (iv)40, el. 3,000 ft., H. M. Smith (UK); Guerrero (*S. of Chilpancingo* between Cajones and Rincón), 1 (vii)32, H. M. Smith (UK); México (*Tejupilco*), 3(vii)33, H. E. Hinton—R. L. Usinger (RLU); Tres Marias Islands (*Maria Madre Island*, Arroyo Hondo), 17(v)25, G. D. Hanna (RLU). UNITED STATES:—Arizona: Santa Cruz County (*Patagonia*), 7(ix)38, C. L. Hubbs & family (UM).

Judged solely on the basis of the material examined, this distinctive species does not seem to be particularly common anywhere, but its center of distribution is patently Mexico.

Ambrysus parviceps Montandon

Ambrysus parviceps Montandon 1897, Verh. zool.-bot. Ges. Wien, 47:17; 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):320.

Ambrysus parviceps, Champion, 1900, Biol. Centr.-Amer., Heter., 2:356.

Ambrysus parviceps, Usinger, 1946, Univ. Kans., Sci. Bull., 31(1):188.

Ambrysus infuscatus Usinger 1946, Univ. Kans., Sci. Bull., 31(1):188.

General appearance: small, rotund species—size 8.0-8.5 mm. long, 5.5-6.0 mm. wide. Dorsum strongly mottled, lighter anteriorly. Venter light golden-yellow, well furred, dark blotched anteriorly.

Head: groundcolor light yellow, with longitudinal darker, obscure blacker markings superimposed; shiny, impunctate; front widely and smoothly protuberant between eyes. Eyes with postero-

lateral angle discernible, a chitinous bar bordering posterior eye margin; from behind, eyes only slightly protuberant above head surface. Head ratios are:

- (1) total length to width 57::80 (71%)
- (2) anterior distance between eyes to posterior distance 36::46 (78%)
- (3) anterior distance between eyes to inner eye margin 36::37
- (4) posterior distance between eyes to greatest length of head posterior to this line 46::14 (30%)
- (5) anterior distance between eyes to greatest length of head anterior to this line 36::8 (17%).

Pronotum: highly polished, impunctate or nearly so; groundcolor light yellow with varied mottling of suffuse brownish; edges smooth, unserrate, densely set with long, yellowish hairs; percent of curvature of pronotal edge 20% (av. 50::10); posterolateral angles usually present but not conspicuous and not obviously at widest point of pronotum. Dorsal pronotal ratios are:

- (1) width between anterior angles to width between posterior angles, 42::100 (42%)
- (2) median length to greatest width 28::100 (28%)
- (3) distance between anterior angle and posterior angle on same side to perpendicular distance between anterior angle and baseline of pronotum 45::45.

Scutellum: reddish-brown, lighter along lateral margins; shiny, shallowly punctate; ratio of three sides 67::49::47.

Hemelytra: color of scutellum, with same shagreenation of white-spotted punctation. Embolium long, of normal width (length-to-width 104::33 = 32%), light yellow in anterior two thirds; in un-rubbed specimens, a conspicuous mat of long, yellow pilosity borders lateral edge. Hemelytra moderately exposing connexiva, and just attaining abdominal tip.

Venter: Connexiva spinose, the posterolateral angles sharp on all segments except I; edges of segments I-II absolutely smooth, unserrated, edges of remaining segments serrate, becoming progressively stronger caudally.

Legs: Prolegs — whitish to yellow; ratio of length to greatest width of ventral surface of femur 66::45 (68%); combined tibia-tarsus, when closed, not overlapping adjacent (proximal) end of femur.

Mesolegs—whitish to yellow; femur long, narrow, ratio of length to median width of ventral surface 81::16 (20%)—length 2.1 mm.; tibia narrow, distal end ventrally with one complete, transverse row of spines set in a solid row across extreme tip, instead of the usual two rows—in this case, the second row is reduced to two or three

spines on each side, leaving the middle section bare—ratio of length to median width 97::15 (15%)—length 1.5 mm.

Metalegs—whitish to yellow; femur long, ratio of length to median width 115::19 (17%)—length 2.60 mm.; tibia long, distal end ventrally with one complete prominent row of spines set in a solid row across the extreme tip instead of the usual two rows—in this case, the second row is reduced to two or three spines on each side, leaving the middle section bare—ratio of length to median width of ventral surface 115::8 (7%)—length 2.50 mm.

Recorded distribution: central Mexico.

Type locality data: "Mexique."

Location of types: "K. K. Hofmuseum, Vienna, Austria."

Specimens examined: MEXICO:—Chihuahua (*Rio San Pedro* between Chihuahua and Naica), 22(vi)34, Smith and Dunkle (UK); (*Corriente*), 24(viii)37, H. D. Thomas (UK); Guerrero (438 kilom. S. of México [City]), 1(xi)36, H. D. Thomas (UK); (*Acapulco*), 12(vii)37, H. D. Thomas (UK); (*Acapulco*), 28(viii)38, L. I. Lipovsky (UK); Michoacán (*Uruapan*) (El Sabino) 28(vii)36, H. D. Thomas (UK); México (*Tejupilco*), 15(vi)33, H. E. Hinton—R. L. Usinger (RLU).

The types of *A. infuscatus* in the California Academy of Sciences, San Francisco, have been examined as well as paratypes of the same name in the Usinger collection, Berkeley, California. Dr. Usinger was able to compare a specimen of *A. infuscatus* with the type of *A. parviceps* in Vienna, and noted the synonymy.

Ambryus pudicus pudicus Stål

Ambryus pudicus Stål 1862, Stet. Ent. Zeit., 23:460.

Ambryus pudicus, Uhler, 1894, Proc. Calif. Acad. Sci., ser. 2, 4:291.

Ambryus pudicus, Montandon, 1897, Verh. zool.-bot. Ges. Wien, 47:12, 17; 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):320.

Ambryus pudicus, Champion, 1900, Biol. Centr.-Amer., Heteropt. 2:356.

Ambryus pudicus, Van Duzee, 1917, Univ. Calif. Publ. Ent. 2:458.

Ambryus pudicus, Usinger, 1946, Univ. Kans., Sci. Bull., 31(1):187.

Ambryus pudicus, La Rivers, 1949, Bull. S. Calif. Acad. Sci. 47(3):108.

General appearance: small, rotund—size 7.0-7.5 mm. long, 4.5 mm. wide. Dorsum strongly bicolored, light and glistening anteriorly. Venter light yellowish, well furred with hydrofuge pile.

Head: groundcolor light yellow; shiny, impunctate, with longitudinal brown streaking on centrum; front widely but smoothly protuberant between eyes. Eyes somewhat triangular, the straight inner and outer margins forming two sides of the triangle, the smoothly curved posterior margin connecting the two; chitinous bar bordering posterior eye margin quite conspicuous; viewed behind,

eyes only slightly protuberant above head surface. Head ratios are:

- (1) total length to width (including eyes) 53::78 (68%)
- (2) anterior distance between eyes to posterior distance 33::48 (69%)
- (3) anterior distance between eyes to inner eye margin 33::32
- (4) posterior distance between eyes to greatest length of head posterior to this line 48::18 (38%)
- (5) anterior distance between eyes to greatest length of head anterior to this line 33::4.5 (14%).

Pronotum: highly polished, impunctate; groundcolor light yellowish, with a varied mottling of suffuse brownish areas and dots; lateral edges absolutely smooth, sparsely pilose, and smoothly curved from anterior to posterior angles, percent of curvature 12-13% (av. 85::11); posterolateral angles rather prominent for this section of the genus, representing approximately the widest point of pronotum, and distinctly posterior to the thin, transverse posterior pronotal line. Dorsal pronotal ratios are:

- (1) width between anterior angles to width between posterior angles 78::165 (47%)
- (2) median length to greatest width 54::165 (33%)
- (3) distance between anterior angle and posterior angle on same side to perpendicular distance between anterior angle and baseline of pronotum 77::79 (97%).

Scutellum: glistening but minutely punctate; blackish, whitish along edges; ratio of three sides 115::74::70.

Hemelytra: brownish-black, somewhat lighter along scutellar margins, generally with two well-defined light spots on border between membrane and corium, and lighter on embolium; shining but coarsely punctate. Embolium long, of normal width (length-to-width 94::30 = 32%), light yellow in anterior two thirds; edge variably equipped with long, golden hairs. Hemelytra narrowly exposing connexiva, which are densely pilose, with an occasional longer yellow hair interspersed; hemelytra generally slightly exceeding abdominal apex.

Venter: bicolored, abdomen lighter yellow than sterna; connexiva sharply, finely spinose except segment I, the posterolateral angles produced; edges of abdominal segments I-II smooth, glabrous, in contrast to marked pilosity and serration of remaining segments.

Legs: Prolegs—whitish to yellow; ratio of length to greatest width of ventral femoral surface 72::46 (64%); combined tibia-tarsus, when closed, markedly overlapping adjacent (proximal) end of femur.

Mesolegs—whitish to yellow; femur long, narrow, ratio of length

to median width of ventral surface 68::12 (18%)—length 1.60 mm.; tibia narrow, distal end ventrally with two prominent transverse rows of spines set in solid rows across tibial width, the last row at extreme tip—ratio of length to median width 84::10 (12%)—length 1.35 mm.

Metalegs—yellow to white; femur long, narrow, ratio of length to median width of ventral surface 84::15 (18%)—length 2.10 mm.; tibia long, narrow, distal end ventrally with two prominent transverse rows of spines set in solid rows across tibial width, the last row at extreme tibial apex—ratio of length to median width of ventral surface 86::6 (7%)—length 2.30 mm.

Recorded distribution: California, Wyoming and Mexico.

Type locality data: "Mexico."

Location of types: Royal Stockholm Museum, Sweden.

Specimens examined: MEXICO:—Guerrero (*Acapulco*), 28(viii) 38, L. I. Lipovsky (UK); (*Río Papagato*, 387 km. S. of México [City]), 31(x)36, H. D. Thomas (UK); (438 km. S. of México [City]), 1(xi)36, H. D. Thomas (UK); México (*Tejupilco*), 20(vi) 33, H. E. Hinton and R. L. Usinger (RLU). GUATEMALA:—*Sanarate*, Kellerman (MCZ).

There is little doubt in my mind that the United States records of this species in the literature are in error. In all probability several species have been confused as *A. pudicus* in the United States. The California records are probably based on *A. californicus*, while small specimens of *A. mormon*, in light of our present knowledge, could be the only material upon which Wyoming records of *A. pudicus* could be based. *A. woodburyi* could also have been easily confused with *A. pudicus* in the early, primitive stages of *Ambrysus* taxonomy.

Ambrysus pudicus barberi Usinger

Ambrysus barberi Usinger 1946, Univ. Kans., Sci. Bull. 31(1):189.

General appearance: a medium-sized subspecies, nearly immaculate—size 7.5-9.0 mm. long and 4.75-6.0 mm. wide.

Head: ratios are:

- (1) total length to width 61::89 (69%)
- (2) anterior distance between eyes to posterior distance 40::55 (73%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 55::19 (35%).

Pronotum: ratios (dorsal) are:

- (1) width between anterior angles to width between posterior angles 52::106 (49%)

- (2) median length to distance between posterior angles 35:106 (33%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 52:50 (96%).

Scutellum: ratio of three sides 69:50:49.

Hemelytra: essentially as in *A. pudicus pudicus*.

Venter: Connexival posterolateral angles distinctly but weakly spinose except those of segment I, and increasing slightly but progressively posteriorly in size. Connexival margins very strongly serrate on all segments except I-II which are always perfectly smooth.

Legs: as in *A. pudicus pudicus*, but larger.

Recorded distribution: northeastern Mexico (Usinger 1946).

Type locality data: "Victoria, Tampico, Mexico, December 10, 1909, F. E. Bishopp, collector" (Usinger 1946).

Location of types: "Holotype, male and allotype, female (U. S. National Museum)" (Usinger 1946).

Specimens examined: MEXICO:—Tamaulipas (*Victoria*), 10(xii) 09, F. C. Bishopp (USNM) (= allotype), (5 mi. S. of *Victoria*), 5(xi)36, H. D. Thomas (UK); México (*Tejupilco*), 15(vi)33, H. E. Hinton and R. L. Usinger (RLU). (The allocation of the type locality, *Victoria*, to "Tampico" in the original description should be changed to *Victoria* in *Tamaulipas*, as indicated above.) UNITED STATES:—Texas (Hidalgo County—*McAllen*), 20(xi)32, L. D. Tut-hill (UK).

The larger *A. pudicus barberi*, with our present knowledge, must be considered the northern component of *A. pudicus*, the smaller typical subspecies seemingly a central Mexico-to-Central American entity.

Ambryus abortus sp. nov.

General appearance: small, rotund species—size 7.5 mm. long, 5.25 mm. wide. Dorsum generally lighter anteriorly, darker and mottled posteriorly, glistening. Venter generally light, with conspicuous dark areas anteriorly.

Head: groundcolor light yellow, shining, glistening, impunctate, with two rather faded, median, longitudinal rows of brown dots on centrum; front widely but smoothly protuberant before eyes. Eyes with posterior bordering chitinous bar somewhat inflated at posterolateral angles and extending slightly laterad; eyes but slightly sinuous above general head surface. Head ratios are:

- (1) total length to width 53:82 (65%)
- (2) anterior distance between eyes to posterior distance 34:48 (71%)
- (3) anterior distance between eyes to inner eye margin 34:35

- (4) posterior distance between eyes to greatest length of head posterior to this line 48::15 (31%)
- (5) anterior distance between eyes to greatest length of head anterior to this line 34::3.5 (10%).

Pronotum: shiny but not polished, irregularly punctate; ground-color light yellow with a varied mottling of suffuse brown spots; lateral edges smooth, unserrate, conspicuously set with long but not dense yellowish hairs; percent of curvature 14% (av. 85::12); posterolateral angles quite prominent and definite, constituting widest part of pronotum, and are definitely situated posterior to the thin, transverse, posterior pronotal line. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 42::94 (45%).
- (2) median length to greatest width 26::94 (28%)
- (3) distance between anterior angle and posterior angle on same side to perpendicular distance between anterior angle and baseline of pronotum 43::42.

Scutellum: blackish with a reddish tinge; lateral edges narrowly light yellow, surface shiny, but not polished, densely, shallowly and roughly punctate. Ratio of three sides 61::41::41.

Hemelytra: suffusedly mottled with light and dark; punctured as is scutellum. Embolium short and broad for the genus, length-to-width 91::33 (36%), bicolored, anterior three fourths light yellow; in unrubbed specimens a thin line of long, sparse yellow hairs along outer edge which, in older individuals, may be entirely rubbed off. Hemelytra moderately exposing connexiva, and just attaining abdominal tip.

Venter: abdominal venter light yellow with a dense coat of short hydrofuge hairs, sterna darker. Connexival posterolateral spines distinguishable on all segments except I, the spines very definitely becoming progressively larger caudad; spination is more in the nature of an acute elongation of the angles than true spination; all lateral connexiva except I-II strongly dentate.

Legs: Prolegs—whitish; ratio of length to greatest width of ventral femoral surface 64::41 (64%); combined tibia-tarsus, when closed, just attaining adjacent (proximal) end of femur.

Mesolegs—whitish; ratio of length to median width of ventral femoral surface 70::15 (21%)—length 2.0 mm.; distal tibial end ventrally with two transverse rows of spines set across tip, the distal row completely solid across apex, the second or proximal row not quite extending the full tibial width, leaving a gap near the outer or anterior end—however, the second row is strong enough to be considered a full row, in contrast to the condition described for

A. parviceps and *A. hungerfordi* where this row fades out medially and the spinal remnants are considered as only secondary armature—ratio of length to median width 58::9 (16%)—length 1.25 mm.

Metalegs—whitish; ratio of length to median width of ventral femoral surface 95::16 (17%)—length 2.25 mm.; distal tibial end ventrally with two prominent transverse rows of spines set across tip, the distal row completely solid across apex, the second or proximal row not extending the full tibial width, leaving a gap near the outer or anterior end—ratio of length to median width 95::8 (8%)—length 2.25 mm.

Distribution: see types.

Type locality data: MEXICO:—México (*Tejupilco*), 15(vi)33, H. E. Hinton and R. L. Usinger.

Location of types: Holotypic male and allotype in the collections of the California Academy of Sciences, San Francisco; four paratypes in the Snow Museum, University of Kansas, Lawrence [three paratypes from the type locality, one paratype from *Corriente*, 24(viii)37, H. D. Thomas (Mexico)]; fourteen paratypes (type locality) in the collection of Robert L. Usinger, Berkeley, California; two paratypes (type locality) in the collection of the writer, Reno, Nevada.

Ambryus hungerfordi hungerfordi Usinger

Ambryus hungerfordi Usinger 1946, Univ. Kans., Sci. Bull. 31(1):192.

General appearance: small, rotund species—size 7.0-7.75 mm. long, 4.75-5.00 mm. wide. Dorsum bicolored, lighter anteriorly, glistening but not polished. Venter strongly contrastingly colored with blackish-browns, yellows, and, in some specimens, greenish.

Head: groundcolor light yellow, often with a greenish cast, shiny, impunctate; front widely but smoothly protuberant between eyes. Eyes somewhat angular at posterolateral angle in some specimens, caused by an angularity of the caudal-bordering chitinous bar; viewed from behind, eyes insignificantly protuberant above head surface. Head ratios are:

- (1) total length to width 52::80 (71%)
- (2) anterior distance between eyes to posterior distance 31::45 (69%)
- (3) anterior distance between eyes to inner eye margin 31::35 (88%)
- (4) posterior distance between eyes to greatest length of head posterior to this line, 45::13 (29%)
- (5) anterior distance between eyes to greatest length of head anterior to this line 31::4 (13%).

Pronotum: shiny, but not polished, roughly and shallowly punctate; groundcolor light yellowish-brown, often with a greenish cast,

with a varied mottling of suffuse brownish areas; edges smooth, unserrate, conspicuously set with long, but not dense, yellowish hairs; percent of curvature of pronotal edge 15% (86::13); postero-lateral angles usually present, but not conspicuous, and approximately at widest point of pronotum. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 41::87 (47%)
- (2) median length to greatest width 29::87 (33%)
- (3) distance between anterior angle and posterior angle on same side to perpendicular distance between anterior angle and baseline of pronotum 39::40.

Scutellum: deep reddish-brown, shiny but not polished, roughly punctate; ratio of three sides 117::74::73.

Hemelytra: darker than scutellum, weakly variegate-blackish and brownish, often with a greenish tinge, punctation as in scutellum. Embolium tending to be somewhat short and wide for the genus, length-to-width 83::30 (36%), light on the anterior two thirds; a thin but conspicuous line of long, sparse yellow hairs along outer edge. Hemelytra moderately exposing lateral connexival margins, and just attaining abdominal apex.

Venter: Connexival posterolateral angles sharply, rather finely spinose, the spination quite evident on all segments except I; however, segment I, instead of completely lacking a spine, as is usual, has a minute, microscopically sharp posterolateral angle, an unusual condition for this section of the genus; all connexiva except I-II are strongly and markedly dentate or serrate, and the posterior half of segment II may show incipient serration under very high magnification.

Legs: Prolegs—yellow, yellow-brown, or greenish; ratio of length to greatest femoral width (ventral surface), 102::65 (64%); combined tibia-tarsus, when closed, not distinctly overlapping adjacent (proximal) end of femur.

Mesolegs—yellow, yellow-brown, or greenish; ratio of femoral length to median width of ventral surface 71::13 (18%)—length 1.85 mm.; tibial distal end ventrally with one complete, prominent, transverse row of spines set in a solid row across extreme tip (as in *A. parviceps*), instead of the usual two—in this case, the second row is reduced to two-three spines on each side, leaving the middle section free—ratio of length to median width 82::14 (17%)—length 1.40 mm.

Metalegs—yellow, yellow-brown to greenish; ratio of femoral length to median width of ventral surface 93::15 (16%)—length

2.20 mm.; tibial transverse apical spination same as for mesolegs—ratio of length to median width 92::9 (10%)—length 2.20 mm.

Recorded distribution: Several localities in Mexico (Usinger 1946), one of which (Tejupilco in México), refers rather to *A. abortus*.

Type locality data: "San Antonio, Mexico, July 15, 1927, R. H. Beamer" (Usinger 1946).

Location of types: "Holotype, male, and allotype, female (Snow Museum, University of Kansas) . . . A series of paratypes collected at the same place by both R. H. Beamer and P. A. Readio" (Usinger 1946).

Specimens examined: MEXICO:—Michoacán (*San Antonio*), 15 (vii)27, P. A. Readio (UK) (paratypes); Sonora (*Álamos*) (Buro-paco District), 23 (x)34, H. S. Gentry (RLU), (*Navajoa*), 5(iii)30, D. Wright (RLU); (*San Bernardo*) (Río Mayo Arroyo), 2(iii)35 (RLU).

Future collecting will probably show that this subspecies occurs in extreme southwestern United States, as well.

Ambryus hungerfordi triunfo subsp. nov.

Identical to the typical subspecies in all essential respects, differing chiefly in the structure of the tip of the female subgenital plate (see illustration).

Distribution: see types.

Type locality data: MEXICO:—Baja California (*Between San José del Cabo and Triunfo*) (Albatross Expedition), 1911 (RLU).

Location of types: Holotype male and allotype in collections of California Academy of Sciences, San Francisco; paratypes in the collection of Robert L. Usinger, Berkeley, California.

Ambryus hungerfordi angularis subsp. nov.

Identical to the typical subspecies in all essential respects, differing chiefly in the structure of the tip of the female subgenital plate (see illustration).

Distribution: see types.

Type locality data: MEXICO:—Guerrero (*Rio Agua* 437 kilom. S. of México [City]), 31(x)36, H. D. Thomas (UK).

Location of types: Holotype male and allotype in the Snow Museum, University of Kansas, Lawrence.

When the variable population of *A. hungerfordi* has been adequately sampled over its range, the two above-described subspecies will very likely fade into the general background of the species; at

the moment they are useful in depicting what are probably the limits of variation in the species, and will stand as distinct until more collecting brings to light such intermediate forms as exist in the populations.

Ambrysus puncticollis Stål

Ambrysus puncticollis Stål 1876, Enum. Hemipt. 5:143.

Ambrysus puncticollis, Montandon, 1897, Verh. zool.-bot. Ges. Wien, 48:13, 20; 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):322.

Ambrysus puncticollis, Van Duzee, 1917, Univ. Calif. Publ. Ent. 2:459.

Ambrysus puncticollis, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:199, 203.

Ambrysus puncticollis, La Rivers, 1949, Bull. S. Calif. Acad. Sci. 47(3):108.

General appearance: large for the genus, comparatively long and narrow—size 13.0-15.5 mm. long, 7.0-9.0 mm. wide. Dorsum weakly bicolored, lighter and glistening anteriorly. Venter yellowish to golden, lighter posteriorly.

Head: smooth, polished, impunctate; groundcolor yellow-brown, two longitudinal median rows of brown dots occupying centrum; front conspicuously protuberant between eyes. Eyes, viewed behind, slightly but definitely protuberant above head surface. Head ratios are:

- (1) total length to width 42::66 (64%)
- (2) anterior distance between eyes to posterior distance 29::42 (69%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 42::16 (38%).

Pronotum: glistening, polished, rather densely set with small, shallow impressions; groundcolor yellow-brown, suffuse brown areas and dots occupying centrum; lateral edges smooth, unserrate, usually with a very few, moderately long hairs; percent of lateral curvature 13% (av. 75::10); posterior lateral angles well rounded, distinctly posterior to thin, posterior, transverse pronotal line. Dorsal ratios are:

- (1) width between anterior angles to greatest pronotal width 68::138 (49%)
- (2) median length to greatest width 54::138 (39%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 68::75 (91%).

Scutellum: deep reddish-brown, more reddish than hemelytra; surface shiny but not polished, shagreened with dense, shallow and rough punctation; ratio of three sides 90::62::62.

Hemelytra: generally dark brown with a reddish tinge, some lightening along emboliar margin; surface shiny but not polished, shagreened as is scutellum. Embolium long and narrow for the genus, length-to-width 82::23 (28%), with no marginal pilosity. Hemelytra rather strongly exposing lateral connexival edges, which bear some pilosity of yellow hairs more or less concentrated at the

segmental junctures; hemelytra just, or not quite, attaining abdominal tip.

Venter: Connexival posterolateral spines large and prominent on all segments except I, which is spineless; connexival edges smooth, unserrate, weakly curved.

Legs: Prolegs—yellow to amber, often with a greenish tinge; ratio of femoral length to greatest width of ventral surface 89::51 (74%); combined tibiotarsus, when closed, slightly but definitely exceeding adjacent (proximal) end of femur.

Mesolegs—yellow to amber, occasionally with a greenish tinge; ratio of femoral length to median width of ventral surface 70::12 (17%)—length 3.0 mm; tibia distally and ventrally with two prominent, complete, transverse rows of spines set solidly across apex—ratio of length to median width of ventral surface is 116::11 (9%)—length 3.0 mm.

Metalegs—yellow to amber, occasionally greenish; ratio of length to median width of femur 81::14 (17%), comparatively stout for the genus—length 3.50 mm.; tibial apical transverse spination same as for mesolegs—ratio of length to median width of ventral surface 114::8 (7%)—length 5.0 mm.

Recorded distribution: southwestern United States.

Type locality data: "Texas."

Location of types: Royal Stockholm Museum, Sweden.

Specimens examined: MEXICO:—Sonora (*Álamos*) (Buropaco District), 23(x)34, H. S. Gentry (RLU); (*San Antonio Colonial*), 15(vii)27, P. A. Readio (UK). UNITED STATES:—Arizona—Cococino County (*Bill Williams Fork*, August, F. H. Snow) (UK); Maricopa County 7(viii)27, P. A. Readio (UK); Yavapai County (*Camp Verde*), 2(ix)38, C. L. Hubbs & Family (UM); (*Tonto Creek*), 15(ix)36, Hubbs-Schultz (UM). Texas—Bexar County (*Helotes*), 1(vii)17, P. A. Munz (UK).

Labels on specimens which have come to me from other parts of the United States show that *A. puncticollis* and *A. melanopterus* have been commonly confused in the past, and it is no longer certain how much of that confusion has shown up in the literature in the way of erroneous distributional listings.

Ambryus pulchellus Montandon

Ambryus pulchellus Montandon 1897, Verh. zool. bot. Ges. Wien, 47:11, 16; 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):319.

Ambryus pulchellus, Champion, 1900, Biol. Centr.-Amer. Hemip. 2:354-361.

Ambryus pulchellus, Van Duzee, 1917, Univ. Calif. Publ. Ent. 2:458.

Ambryus pulchellus, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:198, 200.

Ambryus pulchellus, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):187.

Ambryus nitidulus Montandon 1909, Bull. Soc. Sci. Buc.-Roum. 17(5-6):319, 326.

- Ambrysus nitidulus*, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):187.
Ambrysus pulchellus pallidulus Montandon 1910, Bull. Soc. Sci. Buc.-Roum. 18 (5-6):189.
Ambrysus pulchellus pallidulus, Van Duzee, 1917, Univ. Calif. Publ. Ent. 2:458.
Ambrysus pulchellus pallidulus, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:198, 200.
Ambrysus pallidulus, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):187.
Ambrysus pulchellus, La Rivers, 1951, Univ. Calif. Publ. Ent. 8(7):303-306.

General appearance: rather small for the genus, quite narrow—size 7.0-9.5 mm. long, 4.5-5.5 mm. wide. Dorsum generally lighter anteriorly, but the contrast with the posterior is not striking or sharp; glistening, polished anteriorly, shagreened posteriorly. Venter generally uncontrastingly colored, but slightly darker anteriorly.

Head: groundcolor extremely variable, from light yellow through darker browns to a bright green; polished, impunctate; front is advanced before the eyes, but the outline of head-front and outer eye margins forms a completely smooth semicircle. Eyes absolutely flush with head surface from behind, with no perceptible protuberance. Head ratios are:

- (1) total length to width 66::10 (66%)
- (2) anterior distance between eyes to posterior distance 43::55 (78%)
- (3) anterior distance between eyes to inner eye margin 43::40 (93%)
- (4) posterior distance between eyes to greatest length of head posterior to this line 55::20 (36%)
- (5) anterior distance between eyes to greatest length of head anterior to this line 43::5 (12%).

Pronotum: shiny, polished, impunctate; groundcolor yellow through brown to green, entire centrum, including anterior border, mottled with brown spots, only the "V" area immediately behind region of deepest head penetration free from the mottling. Lateral edges smooth, unserrate, in unrubbed specimens with some moderately long, sparse, yellow hairs along edge, discernible only with considerable magnification; percent of lateral pronotal curvature 13% (av. 90::12); posterolateral angles weak to lacking as definite entities, always situated posterior to transverse posterior pronotal line, not evidently at widest point of pronotum. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 50::84 (60%)
- (2) medial length to greatest width 34::84 (40%)
- (3) distance between anterior angle and posterior angle on same side to perpendicular distance between anterior angle and baseline of pronotum 44::49 (89%).

The comparative increase in width of the anterior pronotal end is significant in this group.

Scutellum: reddish-brown to blackish (even in greenish speci-

mens), shiny but not polished, shagreened with dense, shallow, rough punctation; ratio of three sides 57::44::43.

Hemelytra: deep reddish-brown to black, laterally with some greenish cast in greenish specimens (but not in all such specimens); shagreenation as in scutellum. Embolium very long and narrow for the genus, length to width 115::31 (27%), to normal, 95::30 (32%); lighter in anterior two thirds; in unrubbed specimens with a few sparse yellow hairs along outer edge. Hemelytra rather markedly exposing lateral connexiva, and just attaining abdominal tip.

Venter: Connexival posterolateral angles all slightly produced except those of segment I, but this weak prolongation detectable only with considerable magnification; all lateral edges smooth, non-serrate.

Legs: Prolegs—whitish to amber; ratio of length to greatest width of ventral femoral surface 76::53 (70%); combined tibia-tarsus, when closed, just slightly, if at all, overlapping adjacent (proximal) end of femur.

Mesolegs—whitish-yellow; femur long, narrow, ratio of length to median width of ventral surface 78::16 (21%)—length 2.0 mm; tibia long, narrow, distal end ventrally with one prominent, complete transverse row of spines set solidly across apex; remnants of the usual second row proximal to the distal row are present in sufficient quantity to form a partial second row which extends approximately halfway across tibia, with other half of tibia bare and lacking even an isolated spine which could be postulated as a remnant of the same row (as are present in such as *A. hungerfordi*)—ratio of length to median width of ventral surface 68::7 (10%)—length 1.85 mm.

Metalegs—whitish-yellow; femur long, narrow, ratio of length to median width 96::20 (21%)—length 2.80 mm.; tibia long, narrow, terminal transverse spination as in mesotibia—ratio of length to median width 119::9 (8%)—length 2.90 mm.

Recorded distribution: Texas to Guatemala.

Type locality data: "Guatemala."

Location of types: "collection du Musee de Hambourg." (Germany).

Specimens examined: GUATEMALA: — *Los Amatos*, Kellerman (MCZ). MEXICO:—Chiapas (*La Libertad*), 1(i)38, O. U. Louis (500 m. above sea level) (UK); Michoacán (*Uruapan*) (*El Sabino*), 28(vii)36, H. D. Thomas (UK); Morelos (*Río Amacuzca*, 133 km. S. of México [City]), 14(x)36, H. D. Thomas (UK); Tamaulipas (*Forlón*, 3½ miles W. of), 8(viii)34, Smith & Dunkle (UK), (*Vic-*

toria, 5 miles S. of), (xi)36, H. D. Thomas (UK). UNITED STATES:—Arizona—Cochise County, 29(vii)27, R. H. Beamer (UK). Texas—Kerr County 8(iv)39, D. Millsbaugh (RLU); Sutton County (*Roosevelt*), 21(iv)24, J. O. Martin (RLU); Uvalde County (*Concan*), 6(vii)36, M. B. Jackson (UK); Valverde County (*Del Rio*), 8(vii)38, R. I. Sailer (UK).

As would be expected of a species with as wide a range as this one, there is considerable variation in the population, which has been by no means adequately sampled.

Ambrysus vanduzeei Usinger

Ambrysus vanduzeei Usinger 1946, Univ. Kans., Sci. Bull. 31(1):207.

General appearance: somewhat less than medium size, with a moderate amount of contrasting mottling; size 8.0-9.5 mm. long and 5.5-6.0 mm. wide. Dorsum moderately mottled with brown and yellow, lighter anteriorly. Venter light yellow with no conspicuous darkening.

Head: groundcolor yellow with a variable development of brownish suffusions; shiny, smooth, minutely punctulate; front slightly protuberant before eyes, and with a suggestion of truncation. Viewed posteriorly, eyes flush with head surface, no protuberance evident. Head ratios are:

- (1) total length to width 67::103 (65%)
- (2) anterior distance between eyes to posterior distance 45::62 (73%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 52::46 (88%).

Scutellum: dark reddish-brown, with or without a median longitudinal stripe; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 64::45::44.

Hemelytra: varying from hardly, to moderately contrastingly mottled with yellow and blackish-brown; surface shagreened as in scutellum; embolium approximately average in length and width for the genus (length to width 106::36 = 34%), rarely with detectable, sparse, marginal pilosity—anterior two thirds light yellowish. Hemelytra moderately strongly exposing lateral connexival margins, which have conspicuous marginal pilosity. Posterolateral connexival angles rather weakly angulate-produced, nonspinose; hemelytra fully attaining abdominal tip.

Venter: connexival angles can be generally characterized as weakly angulate-produced, progressing in size and relative development anteriorly to posteriorly; all are angulate-produced except those of segment I, which are weakly right-angulate. Connexival

margins very strongly serrate on all segments except I, weakening anteriorly on segment II.

Legs: Prolegs—whitish to yellowish; ratio of length to greatest width of femoral ventral surface 86::54 (63%); combined tibia-tarsus, when closed, just attaining, or slightly exceeding, adjacent (proximal) end of femur.

Mesolegs—yellowish-white; ratio of length to median width of ventral femoral surface 79::15 (19%)—length 2.0 mm.; tibial distal end ventrally with two prominent transverse rows of spines, the terminal row set solidly across tibial apex, the secondary or proximal row incomplete on outer or anterior edge, half, or slightly more than half the length of terminal row—ratio of length to median width of ventral surface 69::10 (15%)—length 2.0 mm.

Metalegs—ratio of femoral length to median width of ventral surface 108::18 (17%)—length 2.90 mm.; tibial apical transverse spination as in mesotibia—ratio of length to median width of ventral surface 64::6 (9%)—length 3.0 mm.

Recorded distribution: Baja California, Mexico.

Type locality data: "Mulege, Baja California, May 14, 1921, E. P. Van Duzee" (Usinger 1946).

Location of types: "Holotype, male and allotype, female (California Academy of Sciences)" (Usinger 1946).

Specimens examined: MEXICO: — Baja California (*La Purísima Cañon* between La Purísima and Comondú), 24(v)47, -LaR (L), (*Mulege*), 14(v)21, E. P. Van Duzee (RLU), (*San Luis Gonzaga*), 22-23(v)47, -LaR (L). The types have also been examined.

This unique little species is representative of a type seemingly restricted to the long peninsula of Baja California, and has no counterpart in the rest of the genus except the equally unique *A. ochraceus* from South America; both species possess attenuated and prolonged female subgenital plates, with corresponding valvulae development. Probably these ovipositors are used to insert eggs into plant tissues, or hide eggs in crevices or other inaccessible spots, rather than to merely glue them to underwater surfaces, as seems to be common with most species of *Ambrysus*.

Ambrysus buenoi Usinger

Ambrysus buenoi Usinger 1946, Univ. Kans., Sci. Bull. 31(1):199.

Ambrysus buenoi, La Rivers, 1951, Univ. Calif. Publ. Ent., 8(7):310-312.

General appearance: medium-sized species, 8.5-10.0 mm. long and 5.5-6.0 mm. wide. Dorsum yellowish-brown, varying on the one hand toward deep reddish, and on the other to greenish, suf-

fusions; scutellum may stand out somewhat more darkly than remainder, and head and prothorax may be somewhat lighter than hemelytra in general. Venter dark reddish-brown, darkening anteriorly and medially.

Head: amber to yellowish with greenish tints, smooth, shiny, polished, microscopically very irregularly punctulate. Front of head very weakly protuberant between eyes. Eyes, viewed posteriorly, weakly but distinctly protuberant above head surface. Head ratios are:

- (1) total length to width 66::103 (64%)
- (2) anterior distance between eyes to posterior distance 45::65 (75%)
- (3) anterior distance between eyes to inner eye-margin 45::41 (89%)
- (4) posterior distance between eyes to greatest length of head posterior to this line 65::22 (34%).

Pronotum: glistening but not polished, densely, shallowly punctulate; color amber to light-yellow, in the latter case often with a tinge of green; lateral edges smooth, unserrate, in unrubbed specimens with a sparse line of yellow hairs present. Percent of curvature 14% (av. 98::14), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to greatest pronotal width 54::102 (53%)
- (2) median length to greatest width 33::102 (32%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 54::51 (94%).

Scutellum: deep reddish, either same color as hemelytra or darker, but not contrastingly so; surface shiny but not polished, shagreened with dense, shallow, punctation; ratio of three sides 70::50::50.

Hemelytra: uniformly reddish-brown, often with a greenish cast; surface shiny but not polished, shagreened as is scutellum. Embolium somewhat narrow, length to width 61::18 (30%), a faint marginal pilosity usually present. Hemelytra rather markedly exposing lateral connexival edges, which have some marginal pilosity, and not quite attaining abdominal tip.

Venter: Abdominal venter deep reddish-brown, covered with a golden pelt of short, dense hydrofuge hairs; meso- and meta-sterna darker due to lack of the pelt. Connexival posterolateral angles mediumly spinose except segment I, spines progressively increasing in size posteriorly; connexival edges smooth, unserrate, moderately pilose.

Legs: Prolegs—light yellow, amber or greenish; ratio of length to greatest width of femur 84::54 (64%); combined tibia-tarsus,

when closed, just attaining, or slightly exceeding adjacent (proximal) end of femur.

Mesolegs—amber to green; ratio of femoral length to median width of ventral surface 90::18 (20%)—length 2.25 mm.; tibia with distal end ventrally with one prominent, transverse row of spines set solidly across tip—remnants of the usual second, proximal row present as a half row on inner or posterior half of tibia—ratio of length to median width of ventral surface 72::8 (11%)—length 1.95 mm.

Metalegs—amber to green; ratio of length to median width of ventral femoral surface 59::10 (17%)—length 2.75 mm.; distal end of tibia ventrally with the same type of transverse spination as mesotibia—ratio of length to median width of ventral surface 130::9 (7%)—length 3.25 mm.

Recorded distribution: southern Texas.

Type locality data: "Rio Grande, Brewster Co., Texas, June 13-17, 1908, Mitchell and Cushman collectors" (Usinger 1946).

Location of types: "Holotype, male (U. S. National Museum). . . . Allotype, female, and a male and female paratype, same data as type" (Usinger 1946) in the Usinger collection.

Specimens examined: MEXICO:—San Antonio, 15(vii)28, R. H. Beamer (RLU). UNITED STATES:—the allotype and the two paratypes (see above).

Ambryus mormon australis subsp. nov.

General appearance: rather large subspecies, 10.0-12.0 mm. long and 6.5-7.5 mm. wide. Dorsum nearly always lighter anteriorly, often with a pronounced mottling of anterior part of hemelytra; shiny but not polished, variously shagreened. Venter generally entirely yellowish to deep-amber.

Head: light-yellow through brown, some specimens with a greenish tint, usually with some longitudinal brownish markings in center; minutely, densely and shallowly punctulate, shiny; front of head slightly protuberant before eyes, and with a suggestion of truncation. Eyes, viewed posteriorly, only slightly protuberant above general head surface. Ratios are:

- (1) total length to width 41::62 (66%)
- (2) anterior distance between eyes to posterior distance 28::38 (74%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 38::14 (37%).

Pronotum: shiny but not polished, densely, shallowly and roughly punctate; groundcolor yellow to brownish, occasionally with green

developing laterally, usually with a variable development of brown mottling and suffusions on disc; lateral edges smooth, unserrate, with an occasional sparse yellow pilosity; percent of lateral pronotal curvature 13% (av. 67::9); posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to greatest pronotal width 62::127 (49%)
- (2) median length to greatest width 38::127 (30%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 62::58 (94%).

Scutellum: brown, often with a reddish cast, to black, with a variable development of yellowing posteriorly; shiny, markedly rough-shagreened with dense, shallow punctation; ratio of three sides 84::63::62.

Hemelytra: deep brownish to jet-black, usually with enough yellow-spotting to give a mild mottled effect; some greenish lights evident occasionally; shiny, shagreened as is scutellum. Embolium comparatively longer and narrower than that of the typical subspecies, ratio of length to width always less than 35% (av. 72::24 = 33%) (in *A. m. mormon*, length to width varies from 36% [55::20] to 39% [72::28]). Hemelytra rather strongly exposing lateral connexival edges, which have a variable amount of marginal, rather short, pilosity; posterolateral connexival angles always well developed, generally so strongly so as to represent one of the maxima for the genus in this respect; hemelytra not quite, to just, attaining abdominal tip.

Venter: connexival posterolateral angles are strongly spinose on all segments except I, which is entirely lacking in any angular prolongation; margins generally quite smooth, occasionally somewhat rough, but never distinctly dentate or serrate; connexival border bearing spines increases progressively in width posteriorly in contrast to another condition so commonly found in the genus, viz., that in which the border is more or less uniform in width over most of its length, then bends rather abruptly inward under shadow of spine of adjacent segment. Female subgenital plate-apex is distinctively different from that of the typical subspecies, with a much greater development of the two lateral angles into long, more or less parallel-sided processes several times longer than wide. Also, in general, *A. m. australis* is a slimmer form than *A. m. mormon*.

Legs: Prolegs — yellow, amber or greenish; ratio of length to greatest width of ventral femoral surface 54::33 (62%); combined tibia-tarsus, when closed, just attaining, or slightly exceeding, adjacent (proximal) end of femur.

Mesolegs—yellow, amber or greenish; ratio of length to median width of ventral femoral surface 58::10 (17%)—length 2.90 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, about two thirds length of complete, terminal row—ratio of length to median width of ventral surface 48::6 (13%)—length 2.30 mm.

Metalegs—yellow, amber or greenish; ratio of length to median width of ventral femoral surface 74::13 (18%)—length 3.45 mm.; tibial distal transverse spination as in mesotibia—ratio of length to median width of ventral surface 83::6 (7%)—length 4.30 mm.

Distribution: see types.

Type locality data: MEXICO:—Chihuahua (*Río San Pedro* between Chihuahua and Naica), 22(vi)34, Smith and Dunkle (UK).

Location of types: Holotype male, allotype and two paratypes in the Snow Museum, University of Kansas, Lawrence; one paratype each in the collections of Robert L. Usinger, Berkeley, California, and the writer, Reno, Nevada.

Ambryus scalenus sp. nov.

General appearance: a strongly contrastingly mottled species, of rather more than medium size, 10.0-12.5 mm. long, 6.5-8.0 mm. wide. Dorsum strongly mottled with yellow and brown, shiny, conspicuously lighter anteriorly. Venter uniformly very light, almost whitish-yellow, with no darkening except vague spots at lateral connexival abdominal angles.

Head: groundcolor whitish yellow to amber with a variable development of brownish or reddish spotting and streaking; shiny, smooth, minutely punctulate. Head front slightly protuberant before eyes, latter absolutely flush with head surface, when viewed posteriorly. Head ratios are:

- (1) total length to width 82::134 (61%)
- (2) anterior distance between eyes to posterior distance 68::80 (85%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 80::21 (26%).

Pronotum: shiny, smooth, minutely punctate; groundcolor whitish yellow to yellow, often with a faint roseate tinge; a variable development of brown mottling and dotting on disc; lateral edges smooth, unserrate, nonpilose; percent of lateral curvature 16% (av. 63::10), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 70::133 (53%)
- (2) median length to greatest width 44::133 (33%)

- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 70::62 (89%).

Scutellum: dark reddish-brown to blackish, conspicuously marked with yellow along lateral edges; shiny, shagreened with dense, shallow punctation; ratio of three sides 85::62::61.

Hemelytra: strongly and contrastingly mottled with brown and yellow, shiny but not polished, shagreened as is scutellum. Embolium about normal in width for the genus, length to width 144::45 (31%), with no noticeable marginal pilosity. Hemelytra very strongly exposing lateral connexival margins; posterolateral connexival angles rather inconspicuous, but present, angulate-produced. Hemelytra just attaining abdominal tip.

Venter: Connexival posterolateral angles markedly angulate-produced, but hardly truly spinose, except angles of segment I; angles increasing slightly but progressively in size posteriorly; connexival margins distinctly but minutely serrate from segment III posteriorly, occasionally weakly evident posteriorly on segment II, lacking on I.

Legs: Prolegs—whitish yellow to amber; ratio of length to greatest femoral width of ventral surface 99::67 (69%); combined tibia-tarsus, when closed, just attaining adjacent (proximal) end of femur.

Mesolegs—whitish yellow to amber; ratio of length to greatest width of ventral femoral surface 105::23 (22%)—length 2.50 mm.; tibia with distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, slightly more than half the length of terminal row—ratio of length to median width of ventral surface 90::11 (12%)—length 2.20 mm.

Metalegs—whitish to yellowish; ratio of length to median width of ventral femoral surface 140::25 (18%)—length 3.50 mm.; tibia with distal end ventrally with two prominent, transverse rows of spines as in mesotibia—ratio of length to median width of ventral surface 152::13 (9%)—length 4.0 mm.

Distribution: see types.

Type locality data: MEXICO:—Michoacán (*Uruapan*, El Sabino), 28(vii)36, H. D. Thomas (UK).

Location of types: Holotype male, allotype and a large series of paratypes in the Snow Museum, University of Kansas, Lawrence; paratypes in the collections of Robert L. Usinger, Berkeley, California and the writer, Reno, Nevada.

Ambryus convexus Usinger

Ambryus convexus Usinger 1946, Univ. Kans., Sci. Bull. 31(1):196.

General appearance: small, very convex, not conspicuously mottled, compact, species—size 9.0-10.0 mm. long, 6.0 mm. wide. Dorsum deep blackish-brown, with vague, uncontrasting mottling; shiny, lighter anteriorly. Venter deep amber to blackish, darker anteriorly, legs of some specimens outstandingly green.

Head: groundcolor light to deep-yellow, with conspicuous deep brownish areas forming a definite pattern of brownish streaks and suffusions; shiny, glistening, comparatively strongly punctate; front slightly protuberant before eyes, and suggestively truncate. Eyes slightly but distinctly protuberant above head surface when viewed posteriorly. Head ratios are:

- (1) total length to width 66::104 (63%)
- (2) anterior distance between eyes to posterior distance 46::64 (72%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 64::19 (30%).

Pronotum: shiny but rough, conspicuously, coarsely, densely and shallowly punctate; groundcolor yellow-brown, darkening on disc except centrally, but with no pattern development. Lateral edges smooth, unserrate, nonpilose; percent of lateral curvature 17% (av. 96::16), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 52::101 (51%)
- (2) median length to greatest width 33::101 (33%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 52::50 (96%).

Scutellum: blackish, generally with a very deep reddish suffusion; shiny, rough-shagreened with dense, coarse, shallow punctation; ratio of three sides 71::51::50.

Hemelytra: deep-brown, membrane black, some lightening in color laterally, but no mottling of any kind; shiny, shagreened as in scutellum. Embolium normal in proportions, length to width 108::35 (32%), no marginal pilosity; hemelytra strongly exposing lateral connexival margins, which have very short, sparse, marginal pilosity; posterolateral connexival angles somewhat bluntly produced, distinctly nonspinose; hemelytra attaining, to not quite attaining, abdominal tip.

Venter: Connexival posterolateral angles nonspinose, I, II, III right-angulate, IV a slightly smaller angle (*i. e.*, in degrees, not over-all size), V about the same (in degrees only), but larger in size; all angles increase progressively in size posteriorly, and extend

laterally a little more prominently with progression caudally; connexival margins weakly microdentate on posterior segments, smooth on anterior segments.

Legs: Prolegs—yellowish-green to deep amber; ratio of length to greatest width of ventral femoral surface 80::52 (65%); combined tibia-tarsus, when closed, just attaining adjacent (proximal) end of femur.

Mesolegs—yellow-green to amber; ratio of length to greatest width of femoral ventral surface 84::15 (18%)—length 2.10 mm.; tibia with distal end ventrally with two transverse rows of spines, the terminal row prominent, set solidly across apex, the secondary or proximal row very incomplete, only half or less the length of terminal row (i. e., extending half or less across tibial apex)—ratio of length to median width of ventral surface 72::8 (11%)—length 2.00 mm.

Metalegs—yellow-green to amber; ratio of length to greatest width of femoral ventral surface 109::17 (16%)—length 2.85 mm.; distal tibial transverse spination as in mesotibia—ratio of length to median width of ventral surface 70::7 (10%)—length 3.25 mm.

Recorded distribution: central Mexico.

Type locality data: "Real de Arriba, District of Temascaltepec, Mexico, May 25, 1933, H. E. Hinton and R. L. Usinger" (Usinger 1946).

Location of types: "Holotype, male and allotype, female (California Academy of Sciences)" (Usinger 1946).

Specimens examined: the types and several paratypes, the latter in the Usinger collection, Berkeley, California.

Ambrysus inflatus sp. nov.

General appearance: a well-mottled, robust, large, species—10.0-11.5 mm. long, 7.25-8.25 mm. wide. Dorsum generally well and contrastingly mottled, lighter anteriorly; shiny but not polished, variously shagreened. Venter entirely yellow, with no dark markings.

Head: groundcolor light yellow, variously mottled with brownish suffusions and dots; glistening, but minutely roughened; front slightly protuberant before eyes, with a suggestion of truncation. Eyes, viewed from behind, slightly but distinctly protuberant above general head surface. Head ratios are:

- (1) total length to width 42::65 (65%)
- (2) anterior distance between eyes to posterior distance 33::39 (85%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 39::11 (28%).

Pronotum: shiny but not polished, conspicuously, densely, shallowly and roughly punctate; groundcolor light yellow, no green tints of any kind evident on the specimens at my disposal, usually with a variable development of brown mottling on the disc varying from a brownish suffusion to a definite pattern of brown dots. Lateral edges smooth, unserrate, with no detectable pilosity; percent of lateral curvature 13% (av. 62::8), posterolateral angles rather prominent, usually tending more towards angularity than to rounding, definitely set at widest point of pronotum and slightly caudad of transverse pronotal posterior line. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 65::128 (51%)
- (2) median length to greatest width (width between posterior angles in this case) 42::128 (33%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 65::56 (86%).

Scutellum: shiny, markedly rough-shagreened with dense, shallow, punctation; color reddish-brown, with varying amounts of light yellow mottling invading disc from the three angles; ratio of three sides 80::58::57.

Hemelytra: deep reddish-brown usually with enough yellow-spotting to give a mild mottled effect; shiny but not polished, shagreened as in scutellum. Embolium with the most unusual type of inflation in the entire genus, furnishing the diagnostic characteristic of this species—embolium exceptionally stout for the genus (although not quite attaining the maximum in this respect), length to width 75::30 (40%); outer edge, instead of exhibiting the usual smooth curvature, is almost angulate, an abrupt and pronounced change of direction occurring at about three fifths of the distance from the cephalad end (see illustration); no significant pilosity along margin. Hemelytra strongly exposing lateral connexival edges, and attaining abdominal tip.

Venter: Connexival posterolateral angles strongly spinose on all segments except I; angle of segment I, however, is generally sharply right-angulate and projects weakly laterad in contrast to most such angles in other species with this spinal pattern in which segment I angle is either rounded and/or completely obliterated in the general contour of the lateral body margin; connexival margins with some semidentate irregularities visible only under high magnification, but never actually serrate or dentate.

Legs: Prolegs—light yellow to amber; ratio of length to greatest width of ventral femoral surface 52::34 (65%); combined tibia-

tarsus, when closed, generally slightly but distinctly exceeding adjacent (proximal) end of femur.

Mesolegs—whitish to yellow; ratio of length to greatest width of ventral femoral surface 55::12 (22%)—length 2.65 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, about two thirds length of complete, terminal row—ratio of length to median width of ventral surface 95::9 (9%)—length 2.35 mm.

Metalegs—whitish to yellow; ratio of length to greatest width of ventral femoral surface 76::13 (17%)—length 3.55 mm.; tibial distal transverse spination as in mesotibia—ratio of length to greatest width of ventral surface 82::7 (9%)—length 4.00 mm.

Distribution: see types.

Type locality data: MEXICO:—Jalisco (*Cojumatlán*), 9(ix)38, H. D. Thomas (UK).

Location of types: Holotypic male, allotype and several paratypes in the Snow Museum, University of Kansas, Lawrence; one paratype each in the collections of Robert L. Usinger, Berkeley, California, and the writer, Reno, Nevada.

Ambrysus magniceps sp. nov.

General appearance: well-mottled, compact, strongly convex, rather large species—size 11.0-12.5 mm. long and 7.0-7.5 mm. wide. Dorsum rather strongly yellow and brown mottled, shiny, polished, lighter anteriorly. Venter nearly entirely yellow to amber.

Head: groundcolor yellow to yellow-brown with brownish streaks, suffusions and dotting; surface glistening, microscopically, insignificantly punctate; front of head slightly protuberant before eyes, with a suggestion of truncation. Eyes, viewed posteriorly, perfectly flush with head surface. Head ratios are:

- (1) total length to width 48::75 (64%)
- (2) anterior distance between eyes to posterior distance, 35::45 (78%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 45::12 (27%).

Pronotum: shiny but not polished, minutely, almost smoothly microreticulate mediolaterally, micropunctulate medially; groundcolor yellow-brown with a variable development of brown mottling and dotting on disc. Lateral edges smooth, unserrate, with no detectable pilosity; percent of lateral curvature 14% (av. 72::10), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 74::133 (56%)

(2) median length to greatest width 50::133 (38%)

(3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 74::68 (92%).

Scutellum: shiny but not polished, shagreened with dense, shallow punctation; color brown to deep reddish-brown, with varying amounts of yellow invading disc from the three angles; ratio of three sides 87::62::60.

Hemelytra: black-brown, often with deep red tints, with enough yellow spotting to give a moderately strong mottled effect; shiny but not polished, shagreened as in scutellum. Embolium long and narrow, length to width 80::23 (29%), no conspicuous marginal pilosity. Hemelytra strongly exposing lateral connexival margins, which are very sparsely pilose; hemelytra not quite, or just, attaining abdominal tip.

Venter: connexival posterolateral angles nonspinose, very slightly produced laterally from the general body contour as quite sharp, slightly less than 90° angles, angle of segment I the least definite and least produced; connexival margins minutely serrate, serration absent from segment I, weak on II, well developed on remaining connexiva.

Legs: Prolegs—yellow to amber; ratio of length to greatest width of femoral ventral surface 57::40 (70%); combined tibia-tarsus, when closed, just about attaining adjacent (proximal) end of femur.

Mesolegs—yellow, greenish or amber; ratio of length to greatest median width of ventral femoral surface 58::13 (22%)—length 2.85 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, about two-thirds length of complete, terminal row—ratio of length to median width of ventral surface 104::11 (11%)—length 2.55 mm.

Metalegs—yellow, greenish to amber; ratio of length to median width of ventral femoral surface 75::14 (20%)—length 3.50 mm.; distal tibial transverse spination as in mesotibia—ratio of length to median width of ventral surface 86::8 (9%)—length 4.20 mm.

Distribution: see types.

Type locality data: MEXICO:—México (*Tejupilco*), 15-17(vi)33, H. E. Hinton and R. L. Usinger (RLU).

Location of types: Holotype male and allotype in collections of California Academy of Sciences, San Francisco; paratypes in the collections of Robert L. Usinger, Berkeley, California, and the writer, Reno, Nevada.

Ambrysus portheo sp. nov.

General appearance: a large, well-mottled species; 12.5-13.5 mm. long and 8.25-9.25 mm. wide. Dorsum usually contrastingly mottled with yellows and browns, generally somewhat lighter anteriorly, shiny. Venter light yellowish without conspicuous dark areas, often with a greenish tinge anteriorly.

Head: smooth, shiny, minutely punctulate; color yellow to yellow-brown with a variable development of brown suffusions and dotings; head front slightly protuberant before eyes, and distinctly truncate. Eyes, viewed posteriorly, absolutely flush with head surface. Head ratios are:

- (1) total length to width 51::78 (65%)
- (2) anterior distance between eyes to posterior distance 41::47 (87%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 47::14 (30%).

Pronotum: shiny, smooth, minutely punctulate; groundcolor light yellow to yellow with a variable development of brown suffusions and dots. Lateral pronotal edges smooth, unserrate, in unrubbed specimens with some sparse pilosity; percent of lateral curvature 14% (av. 77::11), posterolateral angles weakly distinct, not quite lost in the general rounding of pronotum. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 79::157 (50%)
- (2) median length to greatest width 53::157 (34%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 79::71 (90%).

Scutellum: light reddish-brown, generally lined laterally with yellow; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 103::73::72.

Hemelytra: reddish- to blackish-brown, generally rather well mottled with yellow; shiny but not polished, shagreened as is scutellum. Embolium slightly short and stout for the genus, length to width 85::30 (35%), with some sparse, marginal pilosity. Hemelytra rather strongly exposing lateral connexiva, which have some marginal pilosity; hemelytra attaining abdominal tip.

Venter: connexival posterolateral angles sharply, distinctly spinose except those of segment I (which are, however, in contradistinction to the usual condition for the genus, minutely and sharply right-angulate, distinctly produced laterad of the general body outline), all spines slightly but progressively increasing in size posteriorly; connexival margins distinctly but minutely serrate on all segments except I, occasionally weakening considerably on segment II.

Legs: Prolegs—whitish to amber; ratio of length to greatest width of ventral femoral surface 64::43 (67%); combined tibia-tarsus, when closed, generally slightly exceeding adjacent (proximal) end of femur.

Mesolegs—whitish to yellow; ratio of length to median width of ventral femoral surface 65::13 (20%)—length 3.0 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior margin, approximately half or more the length of complete, terminal row—ratio of length to median width of ventral surface 60::7 (12%)—length 2.55 mm.

Metalegs—whitish to yellow; ratio of length to median width of ventral femoral surface 87::15 (17%)—length 4.0 mm.; tibial terminal transverse spination as in mesotibia—ratio of length to median width of ventral surface 99::7 (7%)—length 5.0 mm.

Distribution: see types.

Type locality data: MEXICO:—Coahuila (*Saltillo*, H. D. Thomas) (UK).

Location of types: Holotypic male, allotype and several paratypes in the Snow Museum, University of Kansas, Lawrence; one paratype each in the collections of Robert L. Usinger, Berkeley, California, and the writer, Reno, Nevada.

The relationship between this species and *A. lundbladi* (see the discussion following *A. fuscus*) cannot be determined with certainty until the male characteristics of *A. lundbladi* are known. With more representative material to base judgment on, it may be necessary to combine the two species. Also concerned in this immediate picture is the still unrecognized *A. signoreti*. When the collecting of Mexican *Ambryus* material has been comprehensive enough to provide an adequate taxonomic sampling of the populations of these three species, it may be found that the name *signoreti* may have to be applied to the entire assemblage; the problem hinges primarily upon the limits of variability involved, which are still unknown.

Ambryus signoreti Stål

Ambryus signoreti Stål 1862, Stet. Ent. Zeit. 23:450; 1876, Enum. Hemipt. 5:143.

Ambryus signoreti, Uhler, 1872, Hayden Surv. Terr., Rept. for 1871:423; 1876, Bull. U.S.G.S. 1:337; 1877, Wheeler Rept. Chief Eng. for 1877:1331; 1884, Stand. Nat. Hist. 2:260; 1894, Proc. Calif. Acad. Sci., ser. 2, 4:291.

Ambryus signoreti, Gillette and Baker, 1895, Hemipt. Colo., p. 63.

Ambryus signoreti, Montandon, 1897, Verh. zool-bot. Ges. Wien. 47:13, 23; 1909, Bull. Soc. Sci. Buc.-Roum. 17:323.

Ambryus signoreti, Champion, 1900, Biol. Centr.-Amer., Hemipt. 2:358.

- Ambrysus signoreti*, Snow, 1906, Trans. Kans. Acad. Sci. 20(1):180.
Ambrysus signoreti, Van Duzec, 1917, Univ. Calif. Publ. Ent. 2:459.
Ambrysus signoreti, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:202.
Ambrysus signoreti, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):185, 203.
Ambrysus signoreti, La Rivers, 1949, Bull. S. Calif. Acad. Sci. 47(3):108.

This species has been consistently misrepresented in the United States literature dealing with *Ambrysi*, and its status in European literature dealing with the Mexican fauna is hardly better. In the large amount of material gathered for this study, I have been unable to place it definitely, and the present unavailability of the original Stål description leaves me no recourse at present but to reproduce a Montandon description of the species for what it is worth. Fortunately, Dr. Usinger was able to make camera lucida drawings of the male and female accessory genitalic structures, the former from the type in Vienna, the latter from an associated female in Vienna and another in the British Museum. His notes on the Vienna and Stockholm specimens may be useful to others pursuing the same problem:

Stockholm Museum—" *Ambrysus signoreti* Stål, 1 male, Mexico. Stal. Type? . . . this should be the type, according to the Enumeratio. *Puncticollis*, *pudicus* and *guttatipennis* are all represented by 'types' with red labels. This differs from the others in that it bears no label in Stål's handwriting. It is closest to *lundbladi* . . . but is larger, flatter above, almost perfectly oval, the pronotum very broad. The connexival angles are only slightly produced, about as in *lundbladi*. Of the genital plates figured, it is most like *occidentalis*."

Vienna museum—" *Ambrysus signoreti* Stål. The type is a male with no genital capsule. It is labelled 'Mexico, coll. Signoret,' 'Poeyi Guer. det. Signoret,' 'Signoreti Stål,' 'Am. signoreti Stål det. Montd.,' and 'type' in red. A second specimen which appears to be conspecific is labelled 'Mexico, 1869,' and 'Amb. signoreti Stål, det. Montd.' This is a female. These are the same as a female in the British Museum with the following labels: 'Belim, Mexico, 1871,' and '63,' 'KK Hof. M. Wien, A. Handlirsch,' ' *Ambrysus signoreti* Stal 1896,' and 'Montandon coll. 1901—233.' These also appear to be the same as the 'type' in Stockholm."

Dr. Usinger's camera lucida drawings of the accessory genitalic apparati make it possible to include the species in the key with reasonable accuracy, but the best available description of the animal at the moment is that of Montandon (1897):

"Plus grand et de forme plus élargie que les autres espèces; 13.7 mm de longueur sur 8.8 mm de largeur. Sa teinte jaunâtre claire

avec de grandes taches brunes sur les élytres lui donne un aspect très reconnaissable à première vue. Le clavus jaunâtre pâle avec une petite tache brune vers la base et une vers l'extrémité. Le marge élytrale est obtusément sinuée derrière l'embolium, ce dernier très élargi, jaunâtre sur toute sa largeur sur les trois quarts basilaire, brunâtre sur le quart postérieur; les segments du connexivum bruns sur le tiers basilaire, jaunâtres ensuite. Le sillon transversal du pronotum bien visible, mais assez superficiel et un peu interrompu au milieu; la partie postérieure du pronotum derrière le sillon, très-pâle, lisse à ponctuation très fine, concolore et peu dense."

There is little doubt that the records of *A. signoreti* for the United States have been based on other species (*A. occidentalis*, *A. arizonus* and probably *A. mormon*), since there is no evidence that it occurs there. In Mexico proper, from the sparse available evidence, *A. signoreti* seems to be closest to *A. portheo*, and future material may show the latter to be a variable unit of the *A. signoreti* population *per se*. The accessory genitalic structures of the two, however, denote two separable entities with present material.

Ambrysus hydor sp. nov.

General appearance: a strongly contrastingly mottled species; 10.5-12.75 mm. long and 7.0-8.5 mm. wide. Dorsum strongly mottled with yellow and brown, shiny, lighter anteriorly. Venter more or less uniformly light yellow to greenish, vaguely darker at lateral connexival angles of abdomen.

Head: groundcolor whitish-yellow to reddish-amber with a variable development of deep brownish or blackish spotting and streaking; shiny, smooth, minutely punctulate. Front of head slightly protuberant before eyes, with a suggestion of truncation. Eyes, viewed posteriorly, essentially flush with head surface. Dorsal head ratios are:

- (1) total length to width 45::70 (64%)
- (2) anterior distance between eyes to posterior distance 34::42 (81%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 42::11 (26%).

Pronotum: shiny, smooth, minutely punctulate; groundcolor whitish-yellow to amber with a variable development of brownish mottling and dotting on disc. Lateral edges smooth, unserrate, very weakly pilose marginally in unrubbed specimens; percent of pronotal lateral curvature 14% (av. 66::9), posterolateral angles well-rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 72::138 (52%)

- (2) median length to greatest width 50::138 (36%)
 (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 72::62 (86%).

Scutellum: dark reddish to blackish-brown, with yellow markings; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 94::69::67.

Hemelytra: strongly and contrastingly mottled with black and yellow, the black often showing reddish lights laterally. Embolium somewhat short and stout for the genus, length to width 151::54 (36%), rarely with detectable, sparse, marginal pilosity. Hemelytra very strongly exposing lateral connexival margins, which are conspicuously pilose; hemelytra just, or not quite, attaining abdominal tip.

Venter: Connexival posterolateral angles strongly and grossly spinose, except segment I, which is, at most, but slightly right-angulate, generally quite blunt, not at all produced; connexival margins distinctly, strongly but somewhat minutely dentate or serrate on all segments except I and occasionally II.

Legs: Prolegs—white, amber or green; ratio of length to greatest width of ventral femoral surface 105::73 (70%); combined tibia-tarsus, when closed, just attaining adjacent (proximal) end of femur.

Mesolegs—white, amber or green; ratio of length to greatest width of ventral femoral surface 62::12 (19%)—length 2.80 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, half, or slightly more than half, the length of the terminal, complete, row—ratio of length to median width of ventral surface 98::9 (9%)—length 2.50 mm.

Metalegs—white, amber or green; ratio of length to greatest width of ventral femoral surface 80::14 (18%)—length 3.75 mm.; tibial distal transverse spination as in mesotibia—ratio of length to median width of ventral surface 86::7 (8%)—length 4.0 mm.

Distribution: see types.

Type locality data: Holotype male, MEXICO:—Morelos (*Río Amacua*, 133 kilom. S. of México [City]), 14(x)36, H. D. Thomas (UK). Allotype female, MEXICO:—Jalisco (*Unión de Tula*), 16(ix)38, H. D. Thomas (UK).

Location of types: Holotype, allotype and paratypes from MEXICO:—Guerrero (*La Sabana*, 226 kilom. S. of México [City]), 20(x)36, H. D. Thomas; (*Puente de Ixtla*), 12(vii)36, H. D.

Thomas; Jalisco (*Unión de Tula*), 16(ix)38, H. D. Thomas; Michoacán (*Uruapan*) (El Sabino), 28(vii)36, H. D. Thomas in the Snow Museum, University of Kansas, Lawrence; paratypes from MEXICO:—México (*Tejupilco*), 19(vi)33, H. E. Hinton and R. L. Usinger in the collection of Robert L. Usinger, Berkeley, California; and MEXICO:—Michoacán (*Uruapan*) (El Sabino), 28(vii)36, H. D. Thomas in the author's collection, Reno, Nevada.

Ambrysus lunatus lunatus Usinger

Ambrysus lunatus Usinger 1946, Univ. Kans., Sci. Bull. 31(1):303.

Ambrysus lunatus La Rivers, 1951, Univ. Calif. Publ. Ent., 8(7):326-328.

General appearance: a widely variable subspecies, both in size and color; 8.5-11.5 mm. long and 6.0-8.0 mm. wide. Dorsum strongly and contrastingly mottled with yellow and brown, moderately shiny, generally not conspicuously lighter anteriorly. Venter light yellow or greenish to amber, without dark markings, generally lighter posteriorly.

Head: groundcolor whitish yellow to amber, often with a greenish tinge, with a variable development of deep brown streaking; shiny, glistening, micropunctate. Front of head slightly protuberant before eyes, either smoothly rounded, or with a faint suggestion of truncation. Eyes, viewed posteriorly, practically flush with head surface. Head ratios are:

- (1) total length to width 74::117 (63%)
- (2) anterior distance between eyes to posterior distance 60::71 (85%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 71::21 (30%).

Pronotum: shiny, smooth, conspicuously but minutely punctate; groundcolor golden yellow to light yellowish-green with a variable development of brown mottling and dotting on disc. Lateral edges smooth, unserrate, occasionally with weakly discernible marginal pilosity; percent of lateral curvature 13% (av. 62::8), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 62::120 (52%)
- (2) median length to greatest width 41::120 (34%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 62::58 (94%).

Scutellum: conspicuously light and dark banded (neither color predominating) with light yellow and light to dark brown, often with a greenish tinge; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 74::54::53.

Hemelytra: strongly and contrastingly mottled with brown and

yellow and green; shiny, but not polished, shagreened as in scutellum. Embolium rather wide and short for the genus, length to width 132::46 (35%), with sparse inconspicuous marginal pilosity. Hemelytra very strongly exposing lateral connexival margins, and just, to not quite, attaining abdominal tip.

Venter: Connexival posterolateral angles markedly spinose except those of segment I which is, at most, but slightly right-angulate-produced; connexival margins distinctly but very minutely serrate on posterior segments, smooth anteriorly.

Legs: Prolegs—yellow, amber or greenish; ratio of length to greatest width of ventral femoral surface 95::61 (64%); combined tibia-tarsus, when closed, generally slightly, but definitely, exceeding adjacent (proximal) end of femur.

Mesolegs—yellowish, amber or green; ratio of length to greatest width of ventral femoral surface 96::18 (19%)—length 2.45 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, about half the length of complete, terminal row—ratio of length to median width of ventral surface 82::10 (12%)—length 2.25 mm.

Metalegs—yellowish, amber or greenish; ratio of length to greatest width of ventral femoral surface 133::22 (16%)—length 3.20 mm.; tibial distal transverse spination as in mesotibia—ratio of length to greatest width of ventral surface 148::13 (9%)—length 3.90 mm.

Recorded distribution: southern Texas.

Type locality data: "Tom Greene County, Texas, July 15, 1928, R. H. Beamer, collector" (Usinger 1946).

Location of types: "Holotype, male, and allotype, female (Snow Museum, University of Kansas)" (Usinger 1946).

Specimens examined: UNITED STATES:—New Mexico—Eddy County 12(vii)27, R. H. Beamer (UK). Texas—Menard County 19(vii)28, R. H. Beamer (UK); Kerr County 9(iv)39, D. Mills-paugh (UK); Travis County 10(iv)39, D. Millspaugh (UK); Valverde County (*Del Rio*), 8(vii)38, D. W. Craik, 8(vii)38, R. I. Sailer (UK).

Future collecting will undoubtedly extend the range of this subspecies into northern Mexico.

Ambrysus lunatus menoides subsp. nov.

General appearance: one of the most strongly and contrastingly mottled units of the genus, medium-sized, 8.5-12.0 mm. long and 6.0-7.0 mm. wide.

Head: essentially as in the typical subspecies. Ratios are:

- (1) total length to width 67::108 (62%)
- (2) anterior distance between eyes to posterior distance 56::68 (82%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 68::21 (31%).

Pronotum: essentially as in the typical subspecies. Ratios are:

- (1) width between anterior angles to width between posterior angles 57::105 (54%)
- (2) median length to greatest width, 35::105 (33%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 57::52 (91%).

Hemelytra: essentially as in *A. l. lunatus*. Embolium rather wide and short for the genus, length to width 123::42 (34%).

Venter: connexival posterolateral angles weakly spinose except those of segment I; angle I right-angulate, slightly produced laterad; angle II prominent, but hardly truly spinose, being more in the nature of angulate-produced, the angle approximately 45°; angle III slightly larger than II, approximately transitional between angulate-produced and true spinosity; IV spinose, larger than III; connexival margins generally distinctly but very minutely serrate on all margins except those of segment I, which are smooth.

Legs: essentially as in *A. l. lunatus*.

Distribution: see types.

Type locality data: MEXICO:—Puebla (*Tehuacan*, 18-25(vii)37, H. D. Thomas) (UK).

Location of types: Holotypic male, allotype, a large series of paratypes from the type locality, and paratypes from MEXICO:—Puebla (*Puebla*, 18(vii)37, H. B. Thomas) (UK) in the Snow Museum, University of Kansas, Lawrence; paratypes from the type locality in the collections of Robert L. Usinger, Berkeley, California, and the writer, Reno, Nevada; paratypes from MEXICO:—Chiapas (*Ixtapa*, 27(iv)41, I. J. Cantrall) (UM) in the Museum of Zoology, University of Michigan, Ann Arbor.

The distinctive differences between *A. l. lunatus* and *A. l. menoides* lie in the terminal aspects of the female subgenital plates and in the male genital processes, as illustrated.

Ambryus dilatus Montandon

Ambryus dilatus Montandon 1910, Bull. Soc. Sci. Buc.-Roum. 18(5-6):190.

Ambryus dilatus, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):198, 199.

Ambryus hintoni Usinger 1946, Univ. Kans., Sci. Bull. 31(1):206.

General appearance: medium-sized, moderately well-mottled species; 9.5-11.0 mm. long and 6.0-6.5 mm. wide. Dorsum usually well

mottled, but often uncontrastingly so, and varying from distinctly lighter anteriorly than posteriorly to nearly uniformly mottled overall, shiny. Venter yellowish to deep reddish with no distinctive dark areas, somewhat lighter posteriorly.

Head: light-yellowish to deep reddish-brown with a variable development of brown dotting and suffusions; shiny, minutely but slightly roughened and punctulate. Front of head slightly protuberant before eyes, and weakly truncate. Eyes, viewed posteriorly, absolutely flush with head surface. Head ratios are:

- (1) total length to width 71::117 (61%)
- (2) anterior distance between eyes to posterior distance 54::67 (81%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 67::20 (30%).

Pronotum: shiny, smooth, minutely punctulate; color yellowish to reddish-brown with a variable development of brown suffusions and dots; lateral edges smooth, unserrate, in unrubbed specimens with some sparse marginal pilosity; percent of lateral curvature 14% (av. 58::8), posterolateral angles quite evident, but somewhat rounded, not distinctly angulate. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 63::117 (54%)
- (2) median length to greatest width 39::117 (33%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 63::55 (87%).

Scutellum: deep reddish-brown, often with a blackish aspect, nearly always lighter in color at the angles, and occasionally bisected by a longitudinal, median yellow line; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 78::56::55.

Hemelytra: largely blackish-brown to brownish, generally uncontrastingly mottled; shiny, shagreened as is scutellum. Embolium about average in proportions for the genus, length to width 68::22 (32%), usually with some marginal pilosity. Hemelytra rather strongly exposing lateral connexival margins, which have some marginal pilosity; posterolateral connexival angles rather minutely and distinctly angulate-produced, but not truly spinose; hemelytra fully attaining abdominal tip.

Venter: connexival posterolateral angles, except those of segment I, distinctly and sharply, minutely, angulate-produced, but hardly to be considered truly spinose, slightly but progressively increasing in size caudally; connexiva generally discernibly serrate with high magnification, at least on posterior segments.

Legs: Prolegs—whitish to amber; ratio of length to greatest width of ventral femoral surface 96::68 (69%); combined tibia-tarsus, when closed, either just attaining adjacent (proximal) end of femur, or distinctly exceeding it.

Mesolegs—whitish to deep amber; ratio of length to greatest width of ventral femoral surface 95::19 (20%)—length 2.50 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, approximately two thirds the length of the complete row—ratio of length to median width of ventral surface 86::11 (13%)—length 2.10 mm.

Metalegs—whitish to amber; ratio of length to greatest width of ventral femoral surface 126::29 (23%)—length 3.10 mm.; tibial distal transverse spination as in mesotibia—ratio of length to greatest width of ventral surface 140::12 (9%)—length 3.50 mm.

Recorded distribution: central Mexico, "Mexico." Montandon gave only the broad designation "Mexico" when describing the species, but Usinger's type locality data for *A. hintoni* provides more specific data: "Tejupilco, District of Temascaltepec, México, June 30, 1933. . . . H. E. Hinton and R. L. Usinger" (Usinger 1946). The types of *A. hintoni* are "Holotype, male and allotype, female (California Academy of Sciences)" (Usinger 1946).

Specimens examined: MEXICO: — Michoacán (near *Chinapa*), 5(ix)38, H. D. Thomas (UK); México (*Tejupilco*), 15(vi)33, H. E. Hinton and R. L. Usinger, paratypes (RLU); (*Corriente*), 24(viii)37, H. D. Thomas (UK). The types of *A. hintoni* have also been examined. "Mexico:" a "cotype" of *A. dilatatus* in the collection of the U. S. National Museum, simply labelled "Mexico," established the synonymy of *A. hintoni*. The terminal structure of the female subgenital plate is so distinctive in the species that it was a simple matter to recognize the synonymy.

Ambryus cosmius sp. nov.

General appearance: a large, rather well-mottled species; 12.0-14.5 mm. long and 8.0-9.25 mm. wide. Dorsum generally noticeably but not contrastingly mottled with light and dark browns, usually lighter anteriorly, and shiny. Venter whitish to amber, with no distinctive dark areas, slightly lighter posteriorly.

Head: light-yellow to yellowish-brown, often with a greenish cast and with a variable development of brown dotting and suffusions; shiny, micropunctulate. Head front slightly protuberant be-

fore eyes, and suggestively truncate. Eyes, viewed from behind, absolutely flush with head surface. Head ratios are:

- (1) total length to width 51::80 (64%)
- (2) anterior distance between eyes to posterior distance 42::52 (81%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 52::14 (27%).

Pronotum: shiny, smooth, micropunctulate; groundcolor whitish-yellow to yellow-brown with a variable development of brown suffusions and dots. Lateral edges smooth, unserrate, in unrubbed specimens with some sparse pilosity. Percent of lateral curvature 14% (av. 78::11), posterolateral angles weakly evident, but nearly lost in the general rounding of pronotum. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 80::158 (51%)
- (2) median length to greatest width 58::158 (31%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 80::75 (94%).

Scutellum: yellow-brown to deep reddish-brown, mottled with light yellows; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 105::74::74.

Hemelytra: reddish-brown to blackish, generally uncontrastingly mottled; shiny, shagreened as in scutellum. Embolium about average in proportions for the genus, length to width 93::29 (32%), in unrubbed specimens usually with some marginal pilosity. Hemelytra rather strongly exposing lateral connexival margins, and not quite, to fully, attaining abdominal tip.

Venter: Connexival posterolateral angles somewhat variable in spinosity, but always with strong, well-developed spines; as is usual, the angles of segment I are entirely nonspinose and nonangulate-produced; spines slightly but progressively increasing in size caudad; connexival margins distinctly serrate, most strongly so caudally, never so on segment I, and occasionally only weakly so on segment II.

Legs: Prolegs—white, yellow or greenish; ratio of length to greatest width of ventral femoral surface 59::39 (66%); combined tibiotarsus, when closed, generally slightly exceeding adjacent (proximal) end of femur.

Mesolegs—white, yellow, amber or greenish; ratio of length to median width of ventral femoral surface 59::13 (22%)—length 2.50 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across tibial apex, the secondary or proximal row incomplete on outer or anterior edge, approximately three fourths or more the length of complete row—ratio of

length to median width of ventral surface 54::7 (13%)—length 2.50 mm.

Metalegs—whitish to amber, often with a greenish tinge; ratio of length to median width of ventral femoral surface 93::18 (20%)—length 4.5 mm.; tibial distal transverse spination as in mesotibia—ratio of length to median width of ventral surface 102::9 (9%)—length 5.0 mm.

Distribution: see types.

Type locality data: MEXICO:—México (*Tejupilco*, 19(vi)33, H. E. Hinton and R. L. Usinger) (RLU).

Location of types: Holotypic male, and allotype in the collections of the California Academy of Sciences, San Francisco; paratypes from the type locality in the collection of Robert L. Usinger, Berkeley, California; paratypes from MEXICO:—Guerrero (*Chilapa*, 29(x)30, L. Schultze) (UK), (*Tecpan*, 2(iv)30, L. Schultze) (UK); Morelos (*Acatlipa*, 88 km. on highway from México [City] to Acapulco, 6(v)45, J. G. Shaw) (UK), (*Morelos*, 14(vii)36, H. D. Thomas) (UK); Oaxaca (*Oaxaca*, 25(viii)37, H. D. Thomas) (UK), in the Snow Museum, University of Kansas, Lawrence.

A. cosmius stood in the Usinger collection for many years as *A. signoreti*, and its true status was not determined until Dr. Usinger was able to examine the European types of *A. signoreti*.

Ambrysus guttatipennis Stål

Ambrysus guttatipennis Stål 1862, Enum. Hemipt. 5:143.

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Ambrysus guttatipennis, Hungerford, 1919, Univ. Kans., Sci. Bull. 11:203.

Ambrysus guttatipennis, Usinger, 1946, Univ. Kans., Sci. Bull. 31(1):202.

Ambrysus guttatipennis, La Rivers, 1949, Bull. S. Calif. Acad. Sci. 47(3):108.

General appearance: a large, well-mottled species; 10.5-13.5 mm. long and 7.0-8.5 mm. wide. Dorsum rather well and contrastingly mottled with yellowish and brown or black, usually lighter anteriorly. Venter yellow to amber, darker about thoracic centrum, lighter posteriorly.

Head: yellow-brown with a variable development of brown dotting and suffusion; shiny, micropunctulate. Head front slightly protuberant before eyes, and quite truncate. Eyes, viewed posteriorly, absolutely flush with head surface. Head ratios:

(1) total length to width 45::73 (62%)

(2) anterior distance between eyes to posterior distance 32::43 (74%)

(3) posterior distance between eyes to greatest length of head posterior to this line 43::13 (30%).

Pronotum: shiny, smooth, micropunctulate; groundcolor yellow-brown with a variable development of brown suffusions and dots; lateral edges smooth, unserrate, in unrubbed specimens with some sparse pilosity; percent of lateral curvature 16% (av. 76::12), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to width between posterior angles 73::145 (50%)
- (2) median length to greatest width 50::145 (34%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 73::71 (97%).

Scutellum: deep reddish-brown, often with a blackish tinge; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 98::69::68.

Hemelytra: reddish to blackish-brown, generally rather well-mottled with yellow; shiny, shagreened as is scutellum. Embolium about average in proportions, length to width 82::26 (32%), usually with some marginal pilosity. Hemelytra moderately exposing lateral connexival margins, which have prominent pilosity. Hemelytra just attaining abdominal tip.

Venter: connexival posterolateral angles rather shortly but distinctly angulate-produced, but not spinose, all angles slightly but progressively increasing in size caudally; there is even a suggestion of this angular-production in the angle of segment I, which angle seldom shows the spinal formula of the remaining angles but is nearly always more or less contoured in with the general outline of the body; connexival margins distinctly serrate on all segments except I, most strongly so posteriorly.

Legs: Prolegs—amber; ratio of length to greatest width of ventral femoral surface 64::42 (66%); combined tibia-tarsus, when closed, distinctly exceeding adjacent (proximal) end of femur.

Mesolegs—amber; ratio of length to greatest width of ventral femoral surface 61::11 (18%)—length 2.90 mm.; distal tibial end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across tibial apex, the secondary or proximal row incomplete on outer or anterior margin, approximately two thirds or more the length of the complete, terminal row—ratio of length to median width of ventral surface 51::8 (16%)—length 2.50 mm.

Metalegs—amber; ratio of length to greatest width of ventral femoral surface 83::14 (17%)—length 4.0 mm.; tibial distal transverse spination as in mesotibia—ratio of length to greatest width of ventral surface 94::7 (8%)—length 4.5 mm.

Recorded distribution: Arizona and Mexico.

Type locality data: "Mexico."

Location of types: Royal Stockholm Museum, Sweden.

Specimens examined: MEXICO:—México (*Real de Arriba*), 25 (v) 33, H. E. Hinton and R. L. Usinger (RLU).

The United States records for this species (Arizona) are very probably based on examples of *A. arizonus* and *A. occidentalis*, and possibly *A. mormon*. There is no evidence at the present time that *A. guttatipennis* even approaches the southwestern United States.

Ambrysus fuscus Usinger

Ambrysus fuscus Usinger 1946, Univ. Kans., Sci. Bull. 31(1):198.

General appearance: a very dark, blackish, totally immaculate species of rather small size, 8.75-9.5 mm. long and 5.5-6.0 mm. wide. Dorsum rough, blackish-brown, more or less unicolorous, shiny. Venter blackish-brown, lighter posteriorly.

Head: deep blackish-brown, generally with a readily discernible, subdermal pair of thin, black, median streaks; shiny but minutely roughened and punctulate. Front of head slightly protuberant before eyes, and distinctly truncate. Eyes, viewed posteriorly, slightly but definitely protuberant above head surface. Ratios are:

- (1) total length to width 73::107 (68%)
- (2) anterior distance between eyes to posterior distance 53::67 (79%)
- (3) posterior distance between eyes to greatest length of head posterior to this line 67::25 (37%).

Pronotum: shiny, but conspicuously roughened and punctate; dark reddish and blackish brown, occasionally showing a faint, vague lightening laterally. Lateral edges smooth, unserrate, in unrubbed specimens with rather conspicuous, but comparatively sparse marginal pilosity. Percent of lateral curvature 19% (av. 105::20), posterolateral angles well rounded. Dorsal ratios are:

- (1) width between anterior angles to greatest pronotal width 56::103 (54%)
- (2) median length to greatest width 35::103 (34%)
- (3) width between anterior angles to distance between anterior angle and posterior baseline of pronotum 56::51 (91%).

Scutellum: blackish, occasionally reddish around edges and often becoming light yellow at the angles; shiny but not polished, shagreened with dense, shallow punctation; ratio of three sides 70::50::50.

Hemelytra: uniformly immaculate blackish-brown, always with discernible, although sometimes vague, lightening in emboliar region; shiny, shagreened as in scutellum. Embolium slightly less than normal in proportions for the genus, length to width 129::40 (31%), usually with some marginal pilosity. Hemelytra moderately exposing lateral connexival margins, which are conspicuously pilose. Hemelytra fully attaining, or exceeding, abdominal tip.

Venter: connexival posterolateral angles nonspinose, increasing progressively in size and slight laterad projection from anterior to posterior; all angles except those of segment I distinctly but minutely projecting laterad due to undercutting of adjacent margin of posterior connexival margin, those of I more or less forming a smooth contour with anterolateral angle of segment II; all remaining posterolateral connexival angles right-angulate except those of IV which are acute angles; connexival margins weakly and irregularly serrate, such serration decreasing anteriorly and totally undemonstrable on margin of segment I.

Legs: Prolegs—yellow-brown; ratio of length to greatest width of ventral femoral surface 93::62 (67%); combined tibia-tarsus, when closed, distinctly exceeding adjacent (proximal) end of femur.

Mesolegs—yellow to brown; ratio of length to greatest width of ventral femoral surface 87::17 (20%)—length 2.0 mm.; tibial distal end ventrally with two prominent, transverse rows of spines, the terminal row set solidly across apex, the secondary or proximal row incomplete on outer or anterior edge, half, or slightly more than half the length of terminal row—ratio of length to greatest width of ventral surface 78::11 (14%)—length 2.0 mm.

Metalegs—yellow to reddish-brown; ratio of length to greatest width of ventral femoral surface 56::10 (18%)—length 2.70 mm.; tibial distal transverse spination as in mesotibia—ratio of length to greatest width of ventral surface 68::6 (9%)—length 3.10 mm.

Recorded distribution: central Mexico.

Type locality data: "Real de Arriba, District of Temescaltepec, Mexico, July 10, 1933, H. E. Hinton and R. L. Usinger" (Usinger 1946).

Location of types: "Holotype, male, and allotype, female (California Academy of Sciences)" (Usinger 1946).

Specimens examined: the types and several paratypes from the type locality, the latter in the Usinger collection, Berkeley, California.

It is not practicable, at present, to incorporate the two Usingerian species, *A. sonorensis* and *A. lundbladi*, into the above structure, since both are known only from a single type specimen, a male in the case of the former, a female in the latter case, both described in 1946. *A. sonorensis* was described from "San Bernardo, Rio Mayo, State of Sonora, Mexico, March 2, 1935, H. S. Gentry collector" (Usinger 1946), while the type locality for *A. lundbladi* is "State of Morelos, Mexico, May 30, 1897, Koebele collection" (Usinger 1946). For detailed descriptions of these, the reader is referred to Usinger's 1946 paper.

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EXPLANATION OF FIGURE 35, PLATE XCIV

Ventral surface of female abdominal tip region

A—subgenital plate.

B—subgenital plate anterolateral angles.

C—laterocaudal connexival angle (secondary or interior posterolateral connexival angle).

D—posterolateral connexival angles (primary or exterior posterolateral connexival angles).

E—connexival margins.

III, IV, V—connexival areas of abdominal segments of these numbers.

FIG. 33, pl. XCIV is *guttatipennis*.

PLATE XCV

- (A)—*Ambrysus pygmaeus* La Rivers, $\times 6$.
(B)—*Ambrysus melanopterus* Stål, $\times 6$.
(C)—*Ambrysus puncticollis* Stål, $\times 6$.
(D)—*Ambrysus parviceps* Montandon, $\times 6$.

PLATE XCV



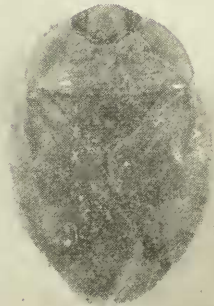
A



B



C



D

PLATE XCVI

- (E)—*Ambrysus pudicus pudicus* Stal, $\times 6$.
(F)—*Ambrysus pudicus barberi* Usinger, $\times 6$.
(G)—*Ambrysus abortus* La Rivers, $\times 6$.
(H)—*Ambrysus hungerfordi* Usinger, $\times 6$.

PLATE XCVI



E



F



G



H

PLATE XCVII

- (J)—*Ambrysus pulchellus* Montandon, $\times 6$.
(K)—*Ambrysus vanduzeei* Usinger, $\times 6$.
(L)—*Ambrysus buenoi* Usinger, $\times 6$.
(M)—*Ambrysus mormon australis* La Rivers, $\times 6$.

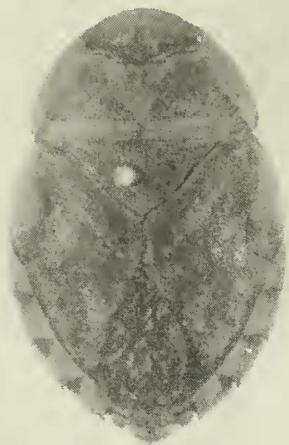
PLATE XCVII



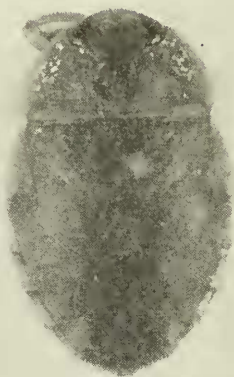
PLATE XCVIII

- (N)—*Ambrysus scalenus* La Rivers, $\times 6$.
(O)—*Ambrysus convexus* Usinger, $\times 6$.
(P)—*Ambrysus inflatus* La Rivers, $\times 6$.
(Q)—*Ambrysus magniceps* La Rivers, $\times 6$.

PLATE XCVIII



N



O



P



Q

PLATE XCIX

- (R)—*Ambrysus portheo* La Rivers, $\times 6$.
(S)—*Ambrysus hydor* La Rivers, $\times 6$.
(T)—*Ambrysus lunatus lunatus* Usinger, $\times 6$.
(U)—*Ambrysus lunatus menoides* La Rivers, $\times 6$.

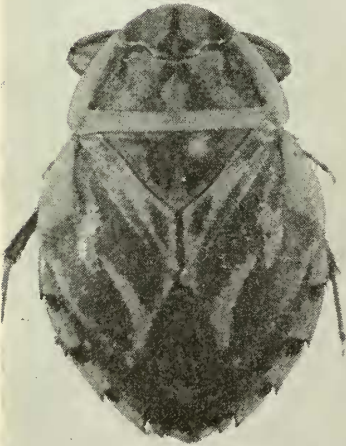
PLATE XCIX



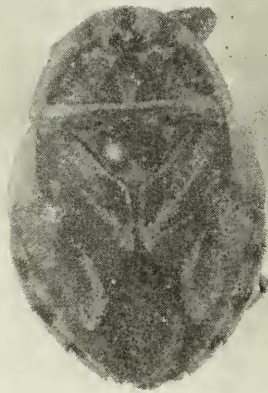
R



S



T



U

PLATE C

- (V)—*Ambrysus dilatatus* Montandon, $\times 6$.
(W)—*Ambrysus cosmius* La Rivers, $\times 6$.
(X)—*Ambrysus guttatipennis* Stål, $\times 6$.
(Y)—*Ambrysus fuscus* Usinger, $\times 6$.

PLATE C



V



W



X



Y